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DISABLED TRANSLATORS' USE OF TECHNOLOGY: PRESENT REALITY AND FUTURE POSSIBILITIES

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Dissertação apresentada para cumprimento dos requisitos necessários à obtenção do grau de Mestre em Tradução, com especialização em Inglês, realizada sob a orientação científica de Prof.ª Doutora Maria Zulmira Castanheira e do Mestre Marco Neves

To my mother, Dr.ª Teresa Patatas, and
my grandmother, Maria Ofélia
Portelinha, the strongest women I know.

DISABLED TRANSLATORS' USE OF TECHNOLOGY: PRESENT REALITY AND FUTURE POSSIBILITIES

PRISCILA PATATAS

RESUMO

A investigação em Tradução como profissão e área de estudo tem aumentado nas últimas décadas. Um aspeto que importa analisar diz respeito à adequação desta área em relação às necessidades de cada tradutor da nossa comunidade, em especial os tradutores com deficiência e incapacidades. É também crucial, particularmente neste século, estar ciente dos diferentes equipamentos e ferramentas tecnológicas disponíveis, de maneira a melhorar o processo de tradução e a vida profissional, sobretudo no que toca à comunidade de tradutores com deficiência. Para este propósito, reunir dados é essencial e deve-se perceber que ferramentas estão disponíveis para o fazer. A presente dissertação tem como objetivo investigar o tema da deficiência no âmbito da Tradução como profissão, a nível da Europa, com especial foco na tecnologia requerida e nas condições de trabalho. Fornecerá um panorama das estatísticas relacionadas com deficiência na Europa e, comparativamente, em Portugal; irá explorar os seguintes tópicos: (i) ergonomia; (ii) equipamento de *hardware*; (iii) sistemas operativos e *software*; e (iv) reconhecimento de voz, assim como as várias aplicações destes no ambiente de trabalho de um utilizador com deficiência; irá ainda descrever a criação (isto é, o programa utilizado, os problemas relativos à construção e outras considerações) e aplicação de um questionário, baseado nos dados pré-existentes acerca deste tema e adaptado a tradutores com deficiência. Esta dissertação também explorará aspetos relacionados com os atos de determinar e localizar o público alvo, os meios de disseminação do questionário, a análise de resultados, e outras temáticas afins. Desejavelmente, este estudo dará um contributo para revelar a realidade do uso de tecnologia pela comunidade de tradutores com deficiência e descrever possibilidades futuras para este grupo. Esta dissertação também poderá ajudar a discutir meios de angariação e estudo de dados relevantes para a área em foco.

PALAVRAS-CHAVE: Deficiência, Tradução, Tecnologia

ABSTRACT

During the past few decades, research into Translation as a profession and an area of study has increased. As such, it is important to analyse its limitations regarding the different needs of translators in our community, such as translators with disabilities. In this century, it is also crucial to be aware and to study the different devices and other technological tools available, in order to improve the translators' workflow and professional life, predominantly within the disabled translators' community. For this purpose, it is relevant to gather data and to understand the tools available to do so. This dissertation aims to research disability within Translation as a profession in Europe, focusing on the necessary technology and work conditions. It will give an overview of disability statistics in Europe, and comparatively, in Portugal; explore the following topics: (i) ergonomics; (ii) hardware devices; (iii) operating systems and software; and (iv) voice recognition, and their many applications in the workplace of a user with disabilities; describe the design i.e. the program used, problems regarding construction, and other considerations) and the application of a questionnaire, based on the existing data regarding this theme, and tailored to translators with disabilities. This dissertation will also explore considerations related to defining and finding the target group, the means of dissemination of the questionnaire, analysis of the results, and other associated matters. Hopefully, this study could bring to light the reality of the use of technology by the disabled translator community and outline potential future possibilities for this group. This dissertation may also help discuss ways of gathering and studying data in this particular field.

KEYWORDS: Disability, Translation, Technology

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INTRODUCTION

As part of the non-teaching component[1] phase of the Master's in Translation, specialising in English[2] — this dissertation will study the relationship between the disabled translator community and its use of technology.

During the past few decades, research into Translation as a profession and as an area of study has increased. As such, it is important to analyse its limitations regarding the different needs of translators, namely translators with disabilities. The different devices and other technological tools available today, in order to improve the translators' workflow and professional life, have been a frequent object of study, but their role, particularly within the disabled translators' community, remains to be researched in depth. For this purpose, it is relevant to gather data and to understand the tools available to do so. This dissertation aims to research disability within Translation as a profession in Europe, focusing on the necessary technology and working conditions.

The first chapter will analyse and critically interpret existing literature on disability in general and disability within the working world and the academic sphere. It will include an overview of different disabilities and how they may hinder translation as a career choice. This will consider both a European view and, comparatively, the current situation in Portugal.

The next chapter will explain the methodology to be used in this study. This will consist of the design and application of a questionnaire carried out online between 26/12/2017 and 20/01/2017. It will also consider issues related to defining and finding the target group. Once the target community has been identified, this will allow more detailed decisions to be made about the format of the questionnaire. The topics included in the questionnaire are:

(i) **ergonomics**, namely the interaction between the translators and their physical working environment, and exercises carried out at the workstation to improve mobility and promote relaxation;

[1] In Portuguese: *componente não-letiva*
[2] In Portuguese: *Mestrado em Tradução — Área de Especialização em Inglês*

(ii) **hardware devices**, such as special keyboards, screens, other devices such as microphones, headphones, Braille reading devices i.e. general hardware and hardware specially produced for the disabled community;

(iii) **operating systems and software**, like layout optimization such as magnification of text and visual stimuli and adaptation of keyboard shortcuts;

(iv) **voice recognition**, i.e. text to speech, speech to text, and combinations, both as separate software and as add-ins to existing Computer Assisted Translation tools.

Conjointly, the third chapter will carry out a preliminary analysis of the data gathered from the questionnaire in order to detect incomplete answers, gaps, or errors, and make any necessary corrections. Then, it will look at the findings to assess to what extent translators with disabilities are making use of the technological tools available to them, and to learn about new tools introduced by the respondents.

Finally, in the conclusion, suggestions will be presented on how technology can further help bring the disabled and the translation communities closer together in the future. Hopefully, this study can bring to light the reality of the use of technology by the disabled translator community and outline potential future possibilities for this group and for those with disabilities who are considering following a career as translators.

CHAPTER I – DISABILITY IN EUROPE AND IN PORTUGAL

Careful and extensive research in this area has proved that it is extremely difficult to find data or any type of study on the population of translators with disabilities, be it in a European context or, more specifically, in Portugal. Thus, to provide a better understanding by way of comparison, this chapter gives an overview of the reality of disability rates in Europe in general, subsequently focusing on the statistics surrounding the labour market and higher education. For further comparison, and since all statistics vary according to multiple factors, from country to country, this chapter explores the same data in regard to Portugal. In conclusion, it will be possible to grasp what the reality of disability may be, considering in particular translation as a profession and possible employment opportunities, and considering students of Translation in higher education or training.

I.1. DISABILITY IN EUROPE

In order for us to achieve some kind of understanding, firstly we should take into consideration a current European overview of disability in its entirety.

> Disability is a complex, evolving and multi-dimensional concept. Disabilities impact on people's lives in many areas, for example in terms of: mobility and the use of transport equipment; access to buildings; participation in education and training, the labour market and leisure pursuits; social contacts and economic independence. (Eurostat, 2018)

For the purpose of this study, disabilities should be considered Longstanding Health Problems and/or basic Activity Difficulties (LHPAD), and the latter are to be understood as limitations regarding sight, hearing, walking, communicating, and similar areas. Thus, this research considers the following categories: mobility and physical impairments (lower limb(s) disability, manual dexterity, and disability in co-ordination with different organs of the body); spinal cord disability; head injuries – brain disability (Acquired Brain Injury [ABI], and Traumatic Brain Injury [TBI]); vision disability (partial or complete); cognitive or learning disabilities; and psychological disorders (Disabled World Towards Tomorrow, 2018).

In 2014, "approximately 28% of people aged 15-64 in the European Union (EU) reported a longstanding health problem or a basic activity difficulty, or both." (Eurostat, 2018) According to recent statistics, EU's population is of about 508 million citizens (European Union, 2018), of whom about 65% are aged 15-64, (The World Bank, 2017) which amounts to about 330 million inhabitants. Thus, if the statistics are still similar to

those of 2014, there are dozens of millions of people within working age (and candidates for higher education and training) that suffer from a LHPAD. As such, it is crucial that the working world and the academic sphere take these factors into consideration and provide the proper environment for the best inclusivity results, so as to ensure equal opportunities to all candidates.

Within the labour market, for instance, "the employment rate of people with basic activity difficulties in the EU-28 in 2011 was 47.3%, almost 20 percentage points below that of people without such difficulties" (Eurostat, 2018), that is, less than half of the people reporting activity difficulties are employed, while people without these limitations fare better by 20%. This may imply many factors, such as lack of working conditions or even job offers that consider candidates with limitations such as these, due to many unfavourable reasons:

> Persons with disabilities are frequently not considered potential members of the workforce. Perception, fear, myth and prejudice continue to limit understanding and acceptance of disability in workplaces everywhere. Myths abound, including that persons with disabilities are unable to work and that accommodating a person with a disability in the workplace is expensive. (United Nations Department of Public Information, 2017)

Despite the reluctance and bias involved in the process of considering and even hiring a candidate with disabilities, there are laws in place that protect these people and that prohibit prejudice and discrimination against them. The European Disability Strategy 2010-2020 (European Commission, 2010) has set initiatives in many areas, as can be seen below:

> […] Make goods and services accessible to people with disabilities and promote the market of assistive devices, […] combat discrimination based on disability and promote equal opportunities, [and] […] raise significantly the share of persons with disabilities working in the open labour market (European Comission, 2017).

Within the area of academic pursuit, the statistics do not portray a favourable picture either. The statistics of 2011 show that "around one person out of four aged 18-24 reporting a basic activity difficulty in the EU leave education and training with lower secondary education at most, compared with 12.4% of those without difficulty" (Eurostat, 2014). This means that it is even rarer for a person with disabilities to pursue higher education or professional training, since the "first and second stage of tertiary education [is] attained by 15% of disabled persons; 25% for those not having a disability" (Eurostat,

2014). This can all be observed in Figure 1 below, according to age, country and disability status:

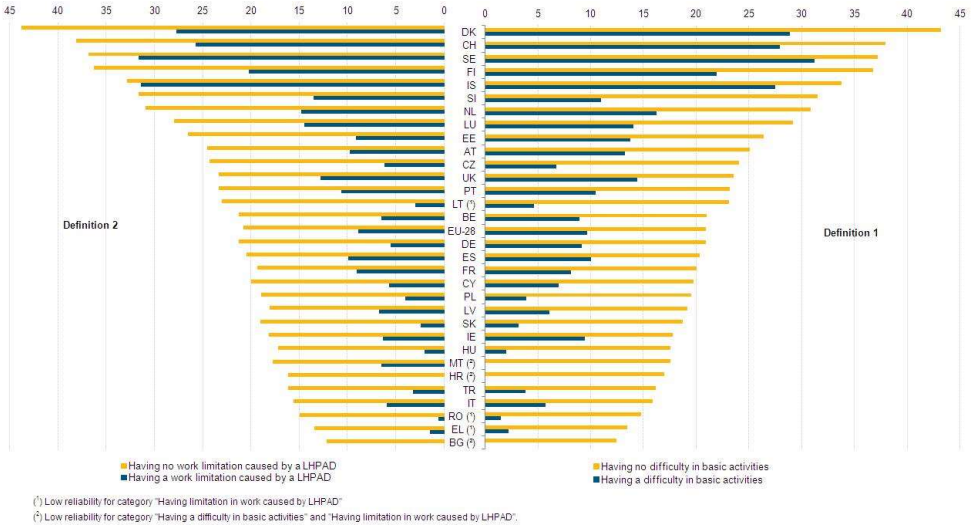

Figure 1 – Persons Aged 15-64 Participating in Education and Training, by Country and Disability Status, in %, 2011 (European Commission, 2017).

The European Disability Strategy 2010-2020 also focuses on academic success, by "promoting inclusive education and lifelong learning for students and pupils with disabilities. [And also provide] Equal access to quality education and lifelong learning [to] enable disabled people to participate fully in society and improve their quality of life" (European Comission, 2017).

Thus, it is not only difficult for candidates with disabilities to be successfully introduced into the labour market, but the lack of enrolment in tertiary education also prevents further training and acquisition of necessary skills required by potential employees. This can lead to a cycle that can be hard to break, particularly if some of the parties are not as invested to do so.

I.2. DISABILITY IN PORTUGAL

For a better context, it is relevant to explore the current situation regarding disability in Portugal. According to the Census of 2001 (Instituto Nacional de Estatística Portugal, 2002), 634 408 citizens reported disabilities (333,911 males and 300,497 females), which consisted of 6.1% of the total population. The main types of disabilities were hearing impairment (0.8%), visual impairment (1.6%), mobility impairment (1.5%), cognitive disability (0.7%), and cerebral paralysis (0.1%). Other disability types constituted 1.4%. It is also relevant to note that 8.8% have an incapacity level lower than

30%, 10% between 30%-59%, 16% between 60%-80%, and 11.6% of people with disabilities reported incapacity superior to 80%. Evidently, these statistics may influence the amount of job offers and other work opportunities available, as well as proper working conditions.

In 2015 (see Appendix A), 12,667 citizens with disabilities were registered as unemployed in the Portuguese Employment Centre (*Instituto de Emprego e Formação Profissional,* IEFP). However, there has been a fourfold increase in placements from 2011 to 2015, which may indicate similar results to this date. The year of 2015 also saw a surge in financial support opportunities for those hiring disabled candidates, with 1,098 initiatives. These include internships (80%-95%) financially-backed by the government or other agencies, subsidies, grants, inclusion programmes, and other types of financial aid (Associação Salvador, 2015). It is also relevant to point out that candidates with disabilities are protected by Portuguese law, specifically by the Ministry of Labour and Social Solidarity (*Ministério do Trabalho e da Solidariedade Social*, MTSS), which "is responsible for ensuring equality for the disabled in access to work and other state services" (Angloinfo Portugal, 2018), and the Portuguese National Institute for Rehabilitation (*Instituto Nacional para a Reabilitação, I.P* – INR, I.P), offering "personal support and advice on technical matters to people with disabilities and their families" (Angloinfo Portugal, 2018).

Regarding education, there is a lack of statistics on access to higher education for Portuguese candidates with activity difficulties. Nevertheless, there are scholarships supporting the pursuit of higher education or further training; however, the openings are few (Ministério do Trabalho, Solidariedade e Segurança Social, 2015). Evidently, this may perpetuate the lack of training and acquisition of specialised skills necessary for job applications and future employment.

CHAPTER II – QUESTIONNAIRE DESIGN

This research is mostly a contemporary workplace study, where the focus is on "the working lives and conditions of professional translators" (Williams & Chesterman, 2011, p. 23), particularly translators with disabilities. The present study aims to gather information on the workplace equipment and technological tools necessary for a productive professional life as a translator with disabilities. It could lead to an understanding of how the available tools and special equipment correlate to their daily work quality and conditions:

> This kind of research obviously contributes to the status of translators as people worth studying, and hence enhances their social visibility. This in turn might influence what other people in society think about translators, and hence the discourse on translation in general – i.e. what people say and think about translation. (Williams & Chesterman, 2011, p. 25)

For this purpose, and due to the scarce literature regarding studies on disabled translators, this research will be predominantly empirical – "in other words, this position means that ideas must be subjected to the rigours of testing before they can be considered knowledge." (Bryman, 2008, p. 6) – and focused on gathering data for further study.

Regarding the matter of gathering data for this type of research, different methods were considered. However, given page and time limits, as well as the purpose of this dissertation, a questionnaire was the chosen tool, due to several factors. A questionnaire is one of the main tools for gathering information, by formulating questions in an orderly way that allow the study of different variables (R. H. Sampieri, 2006, p. 325). The many advantages in choosing a questionnaire for gathering data include, as explained by Barros & Lehfeld (2007):

- It encompasses a larger number of respondents and information in less time than other techniques.
- It can be applied to the masses and can gather information in many specific aspects or matters.
- It facilitates the gathering and analysis of results, particularly when designed with many closed and/or multiple-choice questions.
- The respondents have more time to ponder and prepare their answers without interference by the researcher.
- It ensures anonymity if desired.

- It saves time and financial/human resources when and while being applied.

While the advantages are many and should be taken into consideration, there are also limitations in choosing the application of a questionnaire in this type of research, as elucidated by Barros & Lehfeld (2007):

- Limited number of responses.
- Lower levels of reliability and authenticity of answers.
- Higher number of unanswered questions and incomplete answers.
- It is not possible to clarify any respondents' doubts, aside from any original instructions.
- It is impossible to determine who is answering the questionnaire.
- It needs to be tailored to each target audience, or even to nuances within one.
- Online questionnaires are not completely inclusive, since they cannot be applied to people without an internet connection, computer access or basic user skills. Questionnaires in general cannot be applied to illiterate people either.

Yet, after having taken the advantages and disadvantages into consideration, as well as the objective and target audience of this study, the questionnaire was the chosen tool selected for collecting data on the use of technology by translators with disabilities, since it can be carried out internationally and can obtain numerous responses to straightforward questions for future analysis.

The first step in the design of a questionnaire would be to plan and draft, since "the survey researcher needs to decide what kind of population is suited to the investigation of the topic and also needs to formulate a research instrument and how it should be administered" (Bryman, 2008, p. 165). There are many considerations to bear in mind during this initial phase, in order to get the best results for analysis further on. Thus, to be as specific as possible within the vast area of Translation Studies, and to "narrow it down to a plausible research topic that you can carry out in the time available to you, with the resources you have" (Williams & Chesterman, 2011), it was decided that the research and the questionnaire on translators with disabilities, and in particular on their current use of technology should focus in their work life. This decision was reached after careful consideration of the nature of the study and its purpose/aim, the page limit, the time allotted to the task, all the resources available, and the usefulness and originality of the study.

II.1. DESIGN TOOL

While choosing a tool to design and to carry out a questionnaire, there are very important parameters to consider. For this study, due to its European target audience, an online tool was preferred over any kind of software installation. Not only does it facilitate the process of designing the questionnaire, but it also takes into account the user-friendly factor for the respondents taking the questionnaire. Due to the nature of this study, costless means were preferred over a paid program, so as not to financially burden both the researcher and the respondents. The difficulty often expressed by researchers regarding data input and extraction of results was also taken into account. Therefore, the chosen tool had to provide easy access to results and a user-friendly way to extract them for further analysis. Taking all the above-mentioned factors into consideration, the questionnaire tool chosen for this study was *Google Forms*.

Google Forms is an expansion of *Google Docs*, which was initially released in 2005 as a way for users to have access to files compatible with Microsoft Office software completely online, with no software installation necessary and free of cost. Available on all platforms and operating systems (such as *Windows*, *iOS*, and *Android*), this tool is easily accessible by both the form designer and the target audience. This application was chosen for this research due to its many advantages:

- Entirely free of charge;
- Easily accessible through any internet connection;
- It does not require *Google* accounts or other e-mail accounts for respondents to participate;[3]
- Effortlessly previews the questionnaire being drafted;
- Directly sends the form information to the intended target audience, with optional attachment of an introduction message (that is, opening a secondary mailing channel becomes unnecessary);
- Immediate access to results, both in summary and individual views, complete with adequate graphs and equivalent percentages, as well as in downloadable format, such as a *MS Excel* sheet for further offline analysis;

[3] This reinforces the anonymity the questionnaire designer intended and the respondent wished for, as well as the accessibility to all respondents, regardless of their online presence.

- Various design possibilities, such as many types of forms, creative control over colour palettes, image/video implementation, different question formats and options, and management of sections and their sequence (see Google 2018).

Being a recent addition, and in spite of its advantages, *Google Forms* has still features to be improved on. Although it is not necessary for the research respondents to create or use a *Google* account or other e-mail account, to design a questionnaire a *Google* account is required. This is somewhat limiting, especially for those researchers that have to create one just for this purpose. Another feature that is lacking and hinders the design of a form is the available question formats. Even though there are many options (short answer, paragraph, multiple choice, checkboxes, drop-down, etc.), it is still impossible to add mixed questions, such as "□ No. Why? _____" or "□ Yes. Please specify: _____". Consequently, due to this limitation, a lengthy review and reformulation of questions was necessary for this research as a way to circumvent the issue (see Appendix B and Appendix C). This will be explained in depth further on.

Another shortcoming, observed during the pre-testing phase of the questionnaire, regards localisation. For this questionnaire and corresponding study, English was the language of choice, due to the internationality of the target audience. However, it has been noted that among the pre-conceived question alternatives offered by *Google Forms*, such as adding "Other", these options may be localised by the user's (in this case, the respondent's) computer operating system into its installed language. Thus, even if the questionnaire in its entirety is written in English and intended to remain in that language, to its Portuguese respondent, for instance, "Other" may appear as "Outro", which may lead to the misconception that this particular question requires an answer in their language, consequently leading to errors in the results. This is a flaw that should be considered by Google in order to prevent inaccurate results and to improve the efficiency of this tool.

But the most important disadvantage in relation to the application of this particular questionnaire is that even though it includes an option to eliminate entries from the total, it does not allow the responses to be edited or altered (that is, it does not account for invalid answers, incomplete entries, blank spaces or additional errors), which results in inaccurate and inoperative graphs. Thus, another tool is necessary to create graphs with the data already gathered, and *Google Sheets* was the chosen one for this research.

In spite of the above-mentioned issues, the advantages far outweigh the limitations of this application, particularly regarding this research, and so *Google Forms* proved to be a very efficient, user-friendly, innovative and adequate tool to design and carry out this study's questionnaire.

II.2. QUESTION FORMULATION

During the drafting of the questionnaire, it is fundamental to assemble an idea of its structure and of all the areas to be explored and all the questions necessary for clear and unambiguous results that encompass all the different possible answers. Ideally, the questionnaire would first be divided into the main topics to be covered, subsequently split into questions and sub-questions, so that every possible scenario may be explored. Then, after careful examination and revision, this draft should be reviewed by a third-party, thus adding an unbiased point of view that may suggest new scenarios that weren't previously considered or point out ambiguities to be corrected (preferably, the third-party reviewer(s) should be specialist(s) in the area being explored or in research methods). Undoubtedly, the final say will be on the researcher's side, but there will certainly be alterations to improve the questionnaire and consequently the results.

However, there are some limitations to take into account. In spite of the original questionnaire draft, and its question division (see Appendix B), there will always be alterations to be made while transferring and adapting the draft to the chosen design tool. As previously explained, *Google Forms* has some disadvantages regarding question formats, which should be considered, particularly with regard to studies that include this type of questionnaire. As such, all possible solutions should be clear, but also practical to both the researcher and the respondents.

One of the issues, for instance, is the fact that this design tool does not feature mixed questions, as previously explained. Thus, during the draft phase, questions such as "Type of disability" have to be somewhat repetitive in the answer options, in order to circumvent this issue. Instead of "Mobility and Physical Impairments: a) Lower limb(s) disability; b) Manual dexterity", which *Google Forms* does not allow, the optioned solution is "Mobility and Physical Impairments: Lower limb(s) disability"; "Mobility and Physical Impairments: Manual dexterity"; and so on.

Another concern is what should be determined as required and non-required. *Google Forms* offers the option to make answering certain questions obligatory, which,

in this study, was mainly applied to introductory questions such as "Nationality", "Age", and "Professional situation" (see Appendix C). However, while contemplating topics with various possible answer scenarios, *Google Forms* does not make a distinction and does not offer different questionnaire courses for different answers. Thus, the researcher must adapt the questions, which should be done during the drafting phase. For instance, with regard to "yes" or "no" questions, no additional sub-questions can be introduced, such as "If you replied 'yes' to question X, which type (choose all that may apply)?", because respondents could have initially answered negatively. Also, for this exact reason and for easy understanding and reference, both from the researcher and the respondent points of view, all questions should be numbered accordingly. These are just some illustrative examples of alterations necessary while adapting the draft to the online questionnaire.

II.3. TOPICS

The main topics approached in the questionnaire are: (i) **ergonomics**, namely the interaction between the translators and their physical working environments, and exercises carried out at the workstation to improve mobility and promote relaxation; (ii) **hardware devices**, such as special keyboards, screens, other devices such as microphones, headphones, Braille reading devices, i.e. general hardware and hardware specially produced for the disabled community; (iii) **operating systems and software**, such as layout optimization, like magnification of text and visual stimuli, adaptation of keyboard shortcuts; (iv) **voice recognition**, i.e. text to speech, speech to text, and combinations, both as separate software and as add-ins to existing Computer Assisted Translation tools. All of these topics can be observed in Appendix B and are more fully explained below.

II.3.1. ERGONOMICS

From the Greek *ergon* (work) and *nomos* (laws), ergonomics has been a relevant area of study for many centuries, since efficiency and comfort have often been considered important in the workplace. Nowadays, with the rise of technology, there are even better tools to improve work conditions according to the user's abilities, needs and limitations.

Ergonomics can be understood as a way of designing and tailoring workplaces, products and systems to their users, in a manner that is more efficient and capable of improving their workflow. The International Ergonomics Association defines ergonomics as following:

> […] Scientific discipline concerned with the understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data and methods to design in order to optimize human well-being and overall system performance. […] Ergonomics helps harmonize things that interact with people in terms of people's needs, abilities and limitations. (Definition and Domains of Ergonomics, 2018)

For the purpose of this study, due to activity difficulties of translators with disabilities, this topic of the questionnaire will mostly focus on physical ergonomics, such as appropriate workplace equipment and tension-relieving exercises:

> Physical ergonomics is concerned with human anatomical, anthropometric, physiological and biomechanical characteristics as they relate to physical activity. (Relevant topics include working postures, materials handling, repetitive movements, work related musculoskeletal disorders, workplace layout, safety and health). (Definition and Domains of Ergonomics, 2018)

Through a careful analysis of what is available and accessible in this area, it will be possible to adapt it to the translation activity and, specifically, to translators with disabilities, in a way that may improve their workflow and work conditions.

Presently, in most settings, the use of a computer or a computerised device is almost mandatory. In this day and age, technology plays a crucial role in most areas, and it is constantly evolving, thus being present in the majority of contexts. It not only offers different workflows and provides efficiency and improvement, but takes into consideration the environment.

Schools and other academic institutions, for instance, often require a computer, be it for academic work or for learning about essential software to the course or study area, and regularly ask for paper and other physical wasteful means to be avoided. Within the field of translation, some higher education courses even feature classes on current technology and its uses.[4]

Thus, it is important to teach, and to make future translators aware of the strain constant use of computers bring, as well as ergonomic options to improve postures and prevent physical discomfort, or even injuries, since the "main risk factors are 1) forceful exertions, 2) repetitive motions, 3) awkward posture, 4) static posture, 5) compression or contact stress, 6) poor lighting, 7) vibrations, 8) high noise levels, and 9) cold temperatures" (The University of Arizona, 2018).

[4] Such as at *Universidade Nova de Lisboa*.

Professionally, the majority of companies and institutions use computers on a daily basis, which often involves 8-hour shifts of continuous usage while maintaining the same sitting position. Evidently, this situation also applies to freelance professionals, which may not even have the most appropriate equipment for their work area. More specifically, it is rare the translator who does not use computers to work throughout the day. In fact, many translators spend hours without breaks at a desk or other work stations, staring at a screen and sitting still, in a posture that is often incorrect and physically damaging:

> Poorly designed work stations and poor working practices can lead to musculoskeletal disorders (MSDs). MSDs are disorders of the muscles, nerves, tendons, ligaments, joints, cartilage and spinal discs. Examples of MSDs include: carpal tunnel syndrome, rotator cuff syndrome, De Quervain's Disease, trigger finger, tarsal tunnel syndrome, sciatica, epicondylitis, tendinitis, Reynaud's phenomenon, carpet layers knee, herniated spinal disc, and low back pain. MSD injury accounts for more than one-third of all occupational injuries and illnesses each year, most of which are preventable. These injuries predominantly occur when employees work in awkward postures for extended periods of time or at tasks that require repetitive motions. (The University of Arizona, 2018)

Thus, for translators with disabilities or activity difficulties, it is even more important to provide a safe and comfortable workplace, with all necessary tools to assist and improve their workflow.

Firstly, with regard to the workplace, there are many options to improve physical ergonomics. The first step would be to find the most comfortable sitting posture, in a way that allows the user to reach all elements of the workstation (desk, leg rests, keyboard, mouse, extra equipment…) and still maintain a comfortable position. Then, it is important to position the keyboard and mouse correctly, according to height: “position your keyboard 1 to 2 inches above your thighs. For most people, that probably means employing a pull-out keyboard tray.” (CNET 2016); tilt: “the keyboard should ideally be positioned with a negative tilt – down and away from you, so that your arms and hands follow the downward slope of your thighs.” (CNET 2016); and position: “ideally, your keyboard and mouse should be shoulder-distance apart and as level as possible.” (CNET 2016). The proper keyboard setting can be seen in Figure 2 below:

Figure 2 – Correct Keyboard Tilt (WorkSafeNB, 2010).

These alterations should prove to be more suitable and comfortable.

The next step would be adjusting the position of monitors or any other type of Visual Display Units. The screens should be at a proper distance (see Figure 3 and Figure 4) so as to avoid neck tension and improper posture:

> To find the sweet spot, sit back and extend your arm. The tips of your middle finger should land on your screen. That's it. If you have two monitors, set them up side by side (no gap), and place the secondary monitor off-center. Those who use both monitors equally should center them both. Now, sit back and extend your arm and pan in an arch. As you pan your arm, your finger tip should almost always touch the monitors. Use the same logic when placing other items, like a document holder or a phone. (CNET, 2016)

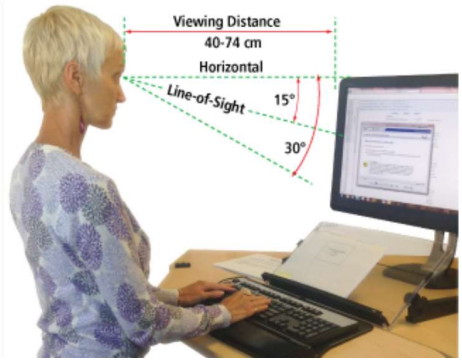

Figure 3 – Proper Position of the Computer Monitor (CCOHS - Canadian Centre for Occupational Health and Safety, 2017).

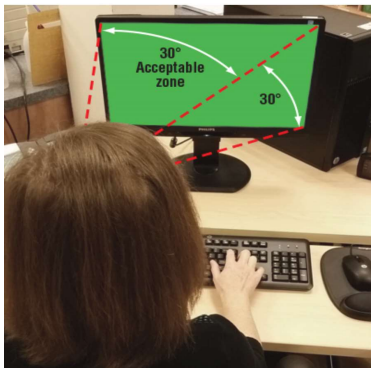

Figure 4 – Appropriate Viewing Angle of the Computer Monitor (CCOHS - Canadian Centre for Occupational Health and Safety, 2017).

Lastly, the user's chair should be positioned accordingly, with regard to length: "when you sit down, there should be a little space between the edge of the chair and the back of your knees, about the size of your fist." (CNET 2016); as well as height: "when you sit, your feet should be on the floor – not dangling – in front of you, and your thighs should be slightly below your hips." (CNET 2016). All of the above-mentioned measurements can be easily calculated online,[5] according to the user's needs. The ideal sitting posture is illustrated in Figure 5 below:

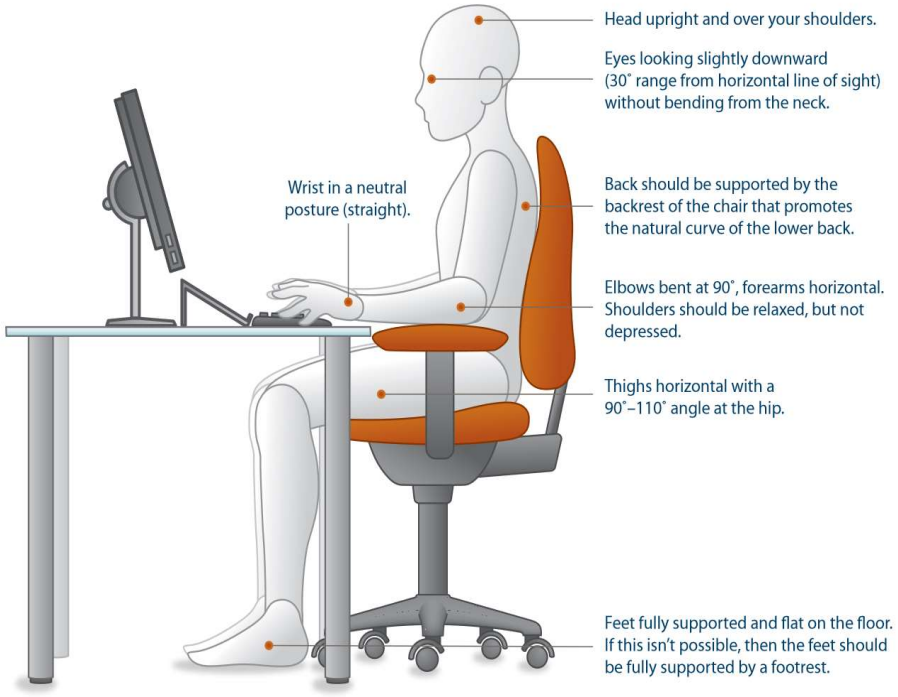

Figure 5 – Depiction of Ideal Sitting Posture (WorkSafeNB, 2010).

The following are some examples of equipment advisable for different types of activity difficulty, including what to search for and what to consider in order to keep the workplace ergonomically fitted:

1. <u>Suitable desks</u>

Each desk has to be adapted to each user's needs. There are many options available for every user. For improving physical mobility, breathing movements, circulation and

[5] For further information: https://www.thehumansolution.com/ergonomic-office-desk-chair-and-keyboard-height-calculator/

muscle stimulation there are sit-to-stand desks, which incorporate body movement to the natural workflow. There are also tilt-adjustable desks, which maintain the optimal ergonomic workplace measurements (screen, keyboard and mouse distance, for instance) at all times, even adapting to the user's movements. Other options to consider include slim desk legs (more room), flexibility regarding its portability, integrated power access, incorporated screen stands, and body-bracing desktops.

2. Fitting chairs

The office chair where the translator will spend their working hours (if no wheelchair is necessary) should remedy incorrect postures and discomfort, while also preventing further lesions. Some features to be considered are full lumbar support, especially regarding the lower back, neck and head rests, armrests, proper seat size and height adapted to the user, ideally following the Two-Point Principle or 2PP™ (RH by Flokk, 2016), which is focused on upright posture and active sitting, which "encourages deeper breathing and circulation, stimulating muscles to keep active without undue strain" (FineBack Furniture, 2015). Other options include seat slide, coccyx cut-out seat, tilt range and foot rests.

3. Leg rests

Even if leg or foot rests are often seen as an optional feature, they play an important role in ergonomics. When choosing an adequate leg or foot rest, there are some factors to take into account, such as sturdiness, height and tilt adjustability, portability, comfort, footplate movement, rotation options and anti-sliding material. Other options include foot massage panels, rollers and rocking motion.

4. Armrests

By employing an armrest, not only will shoulder and neck tension be alleviated, but the pressure on upper limbs will be eased (due to the constant repetitive movements inherent to a computer-based profession). Evidently, ergonomic office chairs should provide up-to-par armrests, but there are additional options to improve upper-limb mobility and relaxation, such as desk armrests. Comfort, attention to hand placement, adjustment of keyboard and mouse, flexibility, adjustability and portability are some features to contemplate.

5. Hand equipment

In order to alleviate wrist tension and prevent weariness or injuries, hand rests or other similar equipment should be considered. Figure 6 clarifies this matter:

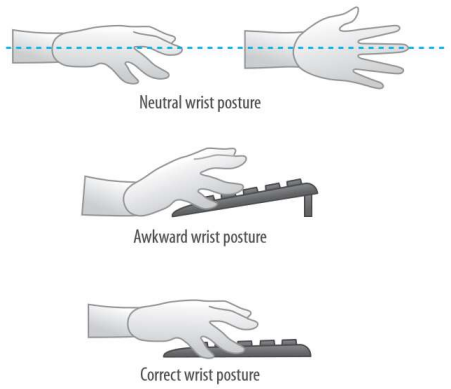

Figure 6 – Correct Wrist Posture (WorkSafeNB, 2010).

Mouse hand rests, for instance, can be mounted on the desk from either side of the user and provide a better reach. There are also keyboard wrist supports, mouse pads with wrist bracing, mouse with hand rest, mouse pads with palm relief, and features with both arm and hand support.

It has been established that proper posture and equipment can vastly improve workplace conditions and, consequently, workflow. However, it is important to keep the right circulation and breathing, as well as body movement. Thus, there are ergonomically designed exercises to help stimulate the muscles and alleviate points of discomfort or even pain. These are even more important to translators with disabilities, since they often maintain uncomfortable postures, various tension points, and have limitation of movement.

There are some general exercises and stretches that can be performed every hour throughout the workday, at the workplace. These are divided into dynamic stretches, which "help promote blood flow and will increase the temperature of your body's tissues" (WorkSafeNB, 2015) and include many activities, such as "light jogging, brisk walking, or the general muscle warm-up activities" (WorkSafeNB, 2015); tension-breaker stretches, focusing on alleviating tension points and muscle contractions, which "if left unchecked, this tightness can intensify and cause persistent pain and discomfort" (WorkSafeNB, 2015); and flexibility stretches, which "will increase the pliability of your muscles and the range of motion in your joints" (WorkSafeNB, 2015).

Evidently, translators with disabilities have their own mobility limitations, so these exercises can be adjusted to each translator's needs and capabilities. The duration and frequency of the exercises can also be adjusted. However, firstly, it is highly advisable to consult with a medical professional in order to determine what is the best exercise routine taking into account the translator's disability.

These are just some exemple exercises, but there are many and more specific active movements that may be added to an exercise plan tailored to different disabilities, as exemplified in Figure 7:

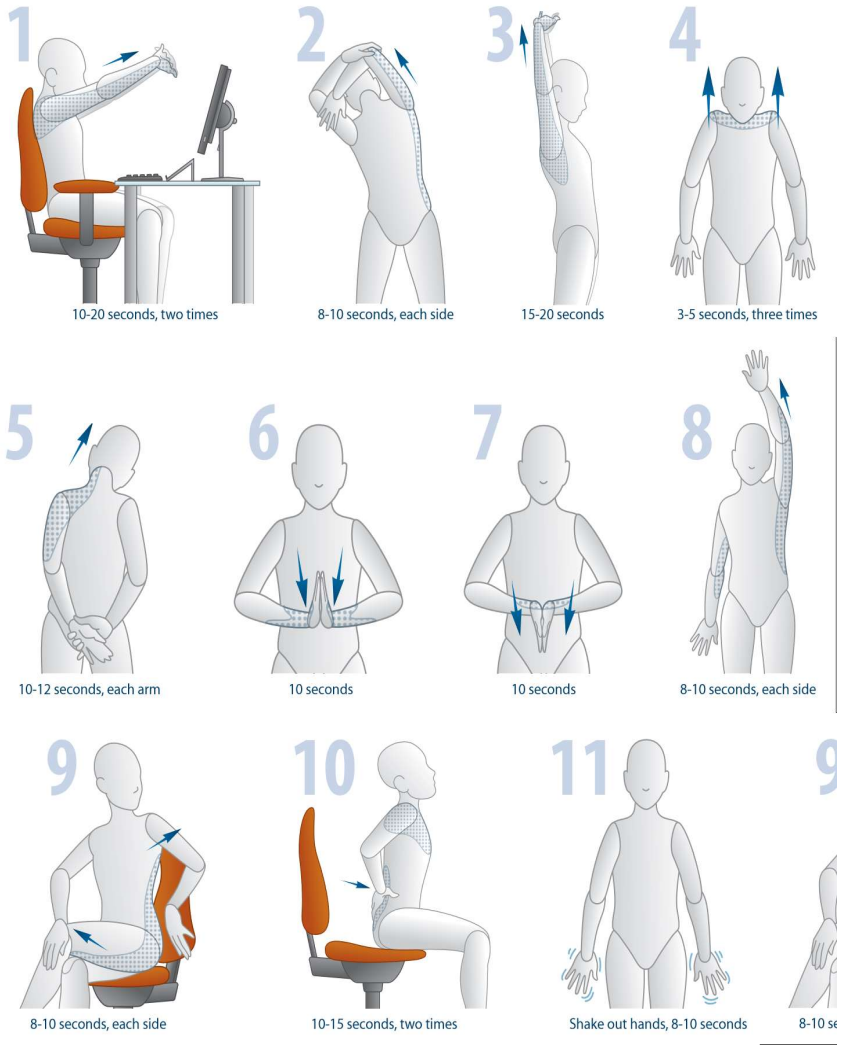

Figure 7 – Computer and Desk Stretches (WorkSafeNB, 2010).

Altogether, setting up a proper exercise routine and performing it regularly reduces weariness, "increases blood supply and nutrients to joint structures and soft tissues" (Middlesworth, 2015), "decreases tightness and resistance in tendons and

muscles" (Middlesworth, 2015), "improves muscular balance and posture (…), muscular balance and coordination" (Middlesworth, 2015).

II.3.2. HARDWARE DEVICES

Due to the aforementioned importance of computers in the current daily work life, it is even more important to ensure that the translator has every hardware equipment necessary within reach. For translators with disabilities, it is even more arduous to find equipment specifically tailored to their needs. In fact, the state-of-the-art hardware equipment available that is valuable to translators with disabilities is usually not very well-known. Thus, it is relevant to make the translation community aware of what is currently available and of any new developments and upgrades.

These are some of the hardware devices that are not only optional, but often required during the translation process of professionals with disabilities:

1. Automatic page turners

These devices consist of a powered and fully automated equipment with switches that turn pages when prompted. These switches can also be adjusted in some models to be activated through pressure, sound or puffs of breath. See an example in Figure 8:

Figure 8 – Automatic Page Turner for Printed Books (PageFlip, 2017).

2. Braille reading devices

Apart from Braille keyboards, Braille reading devices are just as relevant. Braille displays, as shown in Figure 9, are small tactile devices that can be placed near the keyboard and which provide the necessary means to read the text displayed on the screen by touch in Braille:

> Braille displays have a number of cells and each cell has 6 or 8 pins. These pins are electronically moved up and down, to create a Braille version of the characters that appear on the computer

screen. Each Braille cell represents one character from the screen. An 80 cell Braille display represents approximately one line of text on a screen (RNIB). (Living made easy, 2018)

Figure 9 – Example of a Braille Display Device (Living made easy, 2018).

3. Headphones

Headphones are a must for most professionals. They provide privacy and a more immersive environment while working. For translators, specifically those with hearing issues, there are some options, such as hearing aids with amplifiers, induction loop systems, and different headphone designs in order to accommodate the physical particularities of each user.

4. Integrated powered mobility controls

With integrated powered mobility controls, the user can control through a remote a variety of factors, such as electric wheelchair mobility (driving speed, lights…), infrared operated equipment (TV, lights, doors…), and computer devices, like keyboard and mouse.[6] In this manner, the user has better mobility and easy reach to most of the equipment needed in the translation process.

5. Keyboard

Keyboards are easily adaptable. Bigger keys, larger print, higher contrast, with keyguards, *intellikeys* (pressure sensitive) or with Braille keys are just some of the options available. There are also chord keyboards, for instance, which "have only a few keys and rely on keys being pressed in combination to generate letters. They therefore work well for single handed users with independent movement in each of their fingers" (AbilityNet, 2009). If the use of keyboards is not possible, there are alternatives, such as key compressors (head/mouth attached, designed to keep optimal distance from the screen and keyboard, while keeping the user's vision unobstructed), and on-screen keyboards.[7]

[6] For further information: https://www.spectronics.com.au/article/15656
[7] Tutorials: https://www.youtube.com/watch?v=MyMhHQWRztU (Windows), https://www.youtube.com/watch?v=wt0QhT7oM3s (MacOS)

6. Microphone

Microphones are especially important for translators with difficulties in mobility, since they allow them to use voice recognition/speech-to-text software (to be explored further on). The quality of a microphone and its durability should be considered by any user, but translators with disabilities should also keep in mind secure attachment (head attachment, for instance, and its level of comfort and flexibility), weight, height, if it includes speakers or not, wired or wireless, applicability to different platforms (computers, phones…), portability, and sound clarity.

7. Mouse

There are various options for mouse control, adaptable to each user. These include trackballs, joysticks, mouse control using a switch and any reliable body part movement, mouse control via head movement only, mouse control via eye movement only, and mouse control via sip/puff mouth actions.

8. Screen

Simple adjustments can improve the dynamic between the user and the computer monitor, such as brightness and contrast of the screen, appropriate tilt (even by the use of stands), apt monitor size (inches and height), or even extra devices (screen magnifiers, for instance). Touch screens are also a preferred option with regard to some disabilities, especially when there is difficulty in using a keyboard or a mouse, and "it is also possible to put a 'Touch Window' over the front of a standard monitor to give the same function" (AbilityNet, 2009).

9. Speech generating devices

Speech generating devices focus on text-to-speech conversion, which can read out documents or other necessary texts to vision impaired translators. These include scanner pen readers, magnifiers with scanning and reading options, and snap readers, which convert images to speech. For the computer, there are programs that enable this feature, which will be better explained further on.

With regard to all the aforementioned hardware equipment, users are advised to consult a medical professional or a specialist in the area to analyse the necessities and recommend the best fit for the users' workplace.

II.3.3. OPERATING SYSTEMS AND SOFTWARE

As previously mentioned, nowadays it is rare for translators to forego computers during their translation process. Thus, after having all the proper hardware devices tailored to the translator's needs, it is necessary to complete the set-up and apply these tools to each operating system and to test them with translation software, such as Computer-Assisted Translation Tools (CAT Tools). However, the first step should be layout optimisation, both generally, with regard to the operating system, and then specifically, tailoring each program to the user's preferences. This may be an extensive and somewhat exhausting process, but it will improve work conditions, level of comfort and time spent in the translation task. There are also many tutorials available online and most platforms are user-friendly.

There are many layout preferences to be adjusted, enabled or disabled in all operating systems. Regarding screen options, it is possible to adjust brightness,[8] contrast,[9] resolution,[10] to enable/disable night light,[11] to magnify font sizes,[12] icons[13] and mouse pointers,[14] as well as change text and background colours[15] to better suit the user's needs.

[8] Tutorials: https://support.microsoft.com/en-us/help/4026946/windows-change-screen-brightness (Windows), https://support.apple.com/pt-pt/guide/mac-help/change-your-displays-brightness-mchlp2704/mac (MacOS), https://www.maketecheasier.com/configure-screen-brightness-in-ubuntu/ (Linux Ubuntu), https://www.androidcentral.com/android-101-how-set-screen-brightness (Android)

[9] Tutorials: https://support.microsoft.com/en-us/help/4026951/windows-turn-high-contrast-mode-on-or-off-in-windows (Windows), http://etc.usf.edu/techease/4all/vision/how-do-i-change-the-display-contrast-in-mac-os-x/ (MacOS X), https://www.youtube.com/watch?v=V8_aF8OZBd0 (Linux Ubuntu), https://www.tomsguide.com/us/turn-on-high-contrast-android-5.0,news-20484.html (Android)

[10] Tutorials: https://support.microsoft.com/en-us/help/14108/windows-7-change-screen-resolution (Windows), https://support.apple.com/kb/PH25175?locale=pt_PT&viewlocale=en_US (MacOS), https://www.youtube.com/watch?v=SsTav6lXZx8 (Linux)

[11] Tutorials: https://www.howtogeek.com/302186/how-to-enable-night-light-on-windows-10/ (Windows), https://support.apple.com/en-us/HT207513 (MacOs), https://www.youtube.com/watch?v=lYYCvxSsb88 (Linux), https://www.howtogeek.com/270552/how-to-enable-a-night-mode-in-android-to-reduce-eyestrain/ (Android)

[12] Tutorials: https://support.microsoft.com/en-us/help/4028566/windows-10-change-the-size-of-text (Windows), https://support.apple.com/kb/PH25218?viewlocale=en_MK&locale=en_MK (MacOs), https://help.ubuntu.com/stable/ubuntu-help/a11y-font-size.html (Linux Ubuntu), http://www.tomsguide.com/faq/id-1768696/increase-decrease-font-size-android-device.html (Android)

[13] Tutorials: https://www.laptopmag.com/articles/change-icon-size-windows-10 (Windows), https://support.apple.com/kb/PH25218?viewlocale=en_MK&locale=en_MK (MacOS), https://www.addictivetips.com/ubuntu-linux-tips/how-to-resize-desktop-icons-in-ubuntu-linux/ (Linux Ubuntu)

[14] Tutorials: https://www.youtube.com/watch?v=073Xn95qebM (Windows), https://support.apple.com/kb/PH25218?viewlocale=en_MK&locale=en_MK (MacOS), https://www.youtube.com/watch?v=gCKX1M11LGI (Linux Ubuntu)

[15] Tutorials: https://glarminy.com/2016/07/29/change-text-background-color-windows-10/ (Windows), https://support.apple.com/kb/PH25218?viewlocale=en_MK&locale=en_MK (MacOS), https://www.youtube.com/watch?v=OfdLhFTcXhY (Linux)

The feature of text-to-speech (in-built speech function)[16] is also available for users with vision sensitivity/difficulty, as well as sound notifications for images and visual notifications for sounds.

It is also relevant to adapt hardware devices, such as a mouse or keyboard, to the user's operating system, in a way that is more comfortable and efficient. Mouse options, for instance, include controlling the mouse's general movement speed, click speed, switching from right hand to left, "forcing it to only move horizontally and vertically, and putting different functions onto the available buttons" (AbilityNet, 2009), which can all be done through the mouse definitions tab of the operating system. Keyboards can be adjusted as well, through Sticky Keys:[17] "this allows one finger users to operate Shift, Ctrl and Alt keys. The modifier key is held down until the next key is pressed. So, to type "The" the keystrokes would be: Shift+ t+ h + e." (AbilityNet, 2009); Filter Keys:[18] this permits "you to alter the length of time a key needs to be held down before it initially appears or repeats on the screen." (AbilityNet, 2009); Mouse Keys:[19] this lets "the mouse pointer to be moved around using the numeric keypad keys." (AbilityNet, 2009); or simply by adding a feature for prediction while typing, as exemplified in Figure 10:

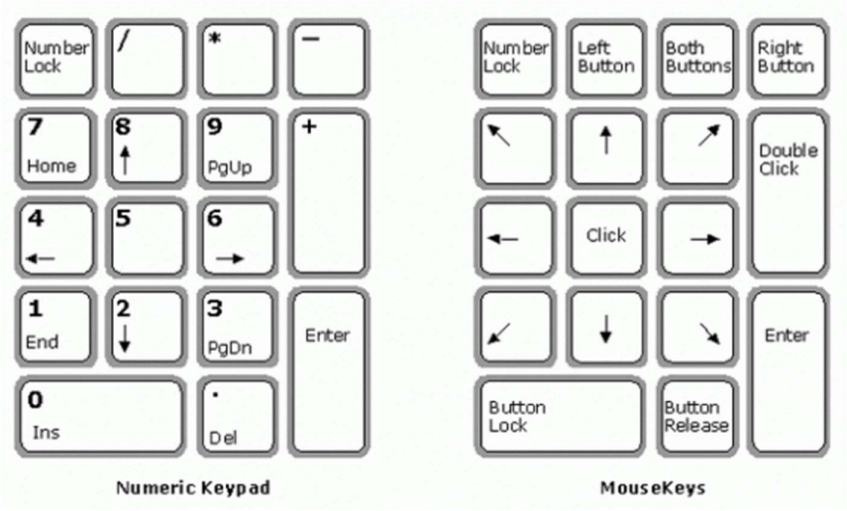

Figure 10 – Mouse Keypad to Mouse Keys (Geekazos, 2011).

[16] Tutorials: https://support.microsoft.com/en-my/help/17173/windows-10-hear-text-read-aloud (Windows), https://support.apple.com/kb/PH25639?locale=pt_PT&viewlocale=en_US (MacOS), https://www.youtube.com/watch?v=M6vVh7gCxh8 (Linux Ubuntu)
[17] Tutorials: https://www.youtube.com/watch?v=APpAl7CdrRM (Windows and MacOS)
[18] Tutorials: https://www.youtube.com/watch?v=vXowkLBeXK4 (Windows), https://www.youtube.com/watch?v=tOLxHG4b4kU (MacOS)
[19] Tutorials: www.abilitynet.org.uk/myway (Windows), https://www.nhs.uk/accessibilityhelp/Using-the-keyboard-to-control-the-mouse-in-OSX.html (MacOSX)

But the most important feature regarding keyboards is the use of shortcuts, hotkeys, or other special keys.[20] These can be used by any translator and tend to make the translation process more efficient and avoid extra mouse movements. The shortcuts can also be edited, not only for general use, but in each software as well.

Clearly, operating systems still have limitations regarding accessibility options. For some translators with disabilities, additional software has to be installed in order to proceed with the translation task. Examples are: computer access software, one-handed typing tutor software, screen enlargement software, switch training programs, voice recognition software, and word prediction software. Like all programs, these may also have certain limitations, particularly when working in tandem with other software, like CAT Tools. Before choosing the best fit, the user is advised to test not only adjustments made during layout customisation, but also how these additional special programs perform in accordance with the preferred CAT Tools.

II.3.4. VOICE RECOGNITION

Voice Recognition (henceforth VR), also known as Speech Recognition (SR), Automatic Speech Recognition (ASR), Computer Speech Recognition (CSR) or Speech To Text (STT), plays an important role as part of computational linguistics. Ideally, this feature studies and interprets a person's voice patterns and cadence in order to accurately calibrate to that specific user, so they can transfer speech to text easily and automatically.

VR has progressed and is influencing modern technology more and more. There are numerous devices that support this feature, will be explained below. VR is being slowly integrated into the translation world. Since its uses in this particular field are quite recent, and it requires a whole different work method, translators may be a bit sceptical. However, it is an essential tool for those with disabilities. In order to understand better what this feature can do for our community, its advantages and disadvantages should be explored earnestly.

It remains a fact that translating is a very exhausting activity, not only mentally, but physically as well. Translators often complain of soreness and tiredness from typing and staring at a screen for hours. VR provides a much-needed reprieve and an alternative solution. VR also quickens the translation process, which is crucial to this profession. In

[20] For more information: List of shortcuts and hotkeys - https://support.hp.com/nz-en/document/c02951398 (Windows), https://support.apple.com/en-us/HT201236 (MacOS), https://help.ubuntu.com/stable/ubuntu-help/shell-keyboard-shortcuts.html (Linux Ubuntu)

translation, time is indeed money, and by saving time, VR will certainly contribute to the professional success of its user.

> ***You can make a lot more money.*** Actually that's a bit of an understatement. An accomplished dictating translator working in a very familiar field can produce 1,500 – 3,000 words per hour. Yes, you read that correctly. *Per hour.* It's a draft translation (to be sure) and you will still need to revise it (always). **But by using dictation you can increase your output – and your income – by around fourfold.** (Hendzel, 2013)

By using voice-only commands, the translator can also multi-task if need be, since it's a mobile and hands-free feature. The translator will not only save time, but it will also be possible to move and complete different tasks while translating. VR also serves as base for the concept of "translation on the go", like translating during the daily commute.

And yet, one of the most important advantages is how VR represents a much-desired gateway to translators with disabilities. Unfortunately, there are many diseases and physical disabilities that make translation an unachievable profession. Not only paralysis or loss of motor skills, but also diseases like Parkinson's hinder the physical mobility of its victims, which means that professions that require strenuous typing are unattainable. VR helps make it all possible, by allowing a speech to text translation and posterior editing using only voice controls. By adjusting to the cadence and characteristics of its user's voice, VR also takes into consideration those affected by speech impediments. Ultimately, Voice Recognition helps making translation accessible to all.

Despite all its advantages, this feature is quite recent and, as such, has some shortcomings and limitations. In order to use VR to its full potential, the translator has to be fluent and maintain a certain rhythm. Therefore, there can't be constant breaks to search for terms or check glossaries during this process. VR is mostly intended for the domains that its user is highly specialised in.

This new method requires practice. The user has to become accustomed to dictating at a fast-pace as well as backspacing and continuous editing, all through voice commands. Punctuation also proves difficult to get used to, since it is now spelled out when it normally isn't in normal speech. These obstacles have proven even more challenging to surpass by translators with activity difficulties.

> ***High-output dictation only works in fields and language pairs you know exceedingly well***. (…) It took nearly five years before I had the respondent expertise and familiarity to do it with ease. Since dictation is a way to connect your mind to the page faster, your mind and voice need to be

> faster than your typing fingers are. If your mind does not work quickly enough in a given language direction or respondent area, there will be no real benefit. (Hendzel, 2013)

And still, what is often considered the biggest disadvantage, i.e. the shortage of languages supported by this feature hinders its growth and how it's spreading worldwide. It is especially difficult in translation, since it is an area that encompasses a large variety of languages. Powerful computers and smartphones are also necessary for most VR software and hardware. The machines must be potent and reliable enough to prevent any glitches or lag, and to provide the best and most flawless experience possible.

Nowadays, there are quite a few voice recognition programs. Some of them will now be analysed with regard to their performance in CAT Tools, such as *MemoQ* and *SDL Trados*, or even in simple direct translation.

1. Siri and Apple Dictation

Siri, an *Apple Inc*. personal assistant software, was originally released in 2011 in *Apple*'s many platforms (*Ios, watchOS, macOS* and *tvOS*). Similarly to *Google Now*, *Siri* easily translates simple sentences on any mobile devices, also taking into consideration the different writing systems (Evans, 2012).

At *Apple*'s *macOS*, there is a dictation functionality that allows the user to turn speech into text, taking into consideration all VR's qualities, since "dictation learns the characteristics of your voice and adapts to your accent, so the more you use it, the better it understands you" (Apple Inc., 2016). This works for direct translations, without the assistance from a CAT-Tool, since *Apple* does not support many translation programs, such as *MemoQ* or *SDL Trados*.

Firstly, the user has to turn this feature on and adjust its settings according to the user's preferences (MusicTechHelpGuy, 2012). Dictation also lets you choose a language from over 30 different ones, as well as the different language varieties. Remarkably, Portuguese is one of them, which is still unusual, unfortunately. This feature also enables any necessary editing of the voice commands, especially regarding punctuation and formatting controls (Apple Inc., 2016). Finally, you can easily convert speech to text, and also enable or disable this function if necessary (MusicTechHelpGuy, 2012). Even though CAT Tools do not work on *Apple* platforms, there is a recent program called *myEcho* that brings the power of the *Ios'* dictation feature to *Windows*. By joining *Ios* dictating with

Windows, it is now possible to apply it to CAT Tools, such as *MemoQ* (Neto, Using MyEcho on iPad and memoQ, 2015).

2. Braina Pro

Braina Pro is a personal assistant as well, available for desktops and *Android*. It obeys basic voice commands and also dabbles into Artificial Intelligence (AI). For translation, the most important feature is its Speech to Text function, which also includes Portuguese (Brainasoft, 2015). It can be used for direct translation; however, it may not have been tested in any CAT Tools yet.

3. Dragon Naturally Speaking

Dragon Naturally Speaking is a VR software package created by *Dragon Systems*, now owned by *Nuance Communications*. Also known as *Dragon for PC* or DNS, it was initially released in 1997 and improved since then. It is, by far, the most used VR software for translation purposes. On desktops, it is applicable to CAT Tools, such as *MemoQ*, *SDL Trados* and *Wordfast* (MemoQ2014; Díaz, 2016; and Morris, 2011).

Oddly enough, *Dragon Naturally Speaking* does not support Portuguese in its *Windows* version. However, its mobile app does. If the Portuguese translator so desires, there's an option to *teamview* your mobile through the computer and use the mobile version in *Windows'* translation programs, by using the *Swipe* app (Neto, 2016).

4. Google Web Speech API

Last but not least, *Web Speech API* by *Google* enables its user to dictate and use VR in web pages: "this API allows fine control and flexibility over the speech recognition capabilities in Chrome version 25 and later" (Google, 2017). Since *Wordfast Anywhere* is a translation tool on a web-based platform, this *Google* feature brings all VR advantages to this program (CATguruEN, 2016).

Even though this type of technology has evolved exponentially in little time, there is still much to be done and many shortcomings to resolve. Translators, especially those with disabilities, play a very important role in the development of this feature, by exploring its reaches and limitations and providing feedback so that it can be improved.

II.4. TARGET AUDIENCE

Before beginning any kind of research that requires respondents, such as the present one, the target audience should be considered and pondered upon. Not only does

it have to be decided to whom the questionnaire will be tailored to, but also what parameters should be set, according to the purpose and restrictions of the study itself (page and time limits, for instance).

Since statistical data of translators with disabilities was unknown (following extensive research of available studies), it was difficult to make a ballpark estimate of the respondents to be contacted. After careful consideration, it was decided that the questionnaire should be limited to European translators with disabilities, since a worldwide study would include a very extensive list of countries to contact for such a short time period, and a smaller range (focusing on Portugal, for instance) would perhaps provide insufficient data for further analysis.

Thus, in order to contact all possible respondents in Europe, a list of all main European translation associations was compiled, according to country and comprising the different pages and contact information available (see Appendix D). Since there are translators who are not members of associations, other groups were contacted through social media, such as *Facebook* pages (see Appendix D). The most important factor was making sure that the target audience was contacted through all means available, since the number of expected respondents was unknown.

Another crucial factor during this phase was compiling an introductory message. This message will not only be what the target audience will have contact with first, and what will prompt participation, but it will also be adapted to introduce your questionnaire to future respondents in the application itself. Thus, the introductory message (see Appendix E) should include a brief preface of the researcher and the study in question, by answering "the major research questions (…): Who? What? Why? and How?" (Williams & Chesterman, 2011, p. 16). The message should also include any instructions to the completion of the questionnaire, an expression of gratitude to agents for circulating the questionnaire and to respondents for taking it, and a disclaimer, which contains the closing date, an estimate of the time this task would take, and an authorisation for data analysis from the answers entered by the respondents. It is also important to inform the target audience of the anonymity of the study. In this case, the respondents were informed that their answers would be anonymous, unless they chose otherwise, i.e. unless the respondents chose to add their e-mail address in the end for further research.

Lastly, even though *Google Forms* offers the option to send messages directly to all intended recipients as previously mentioned, for this study it was preferred to send e-

mails directly through an e-mail account, in order to keep better track of associations already contacted and to organize all messages in a clear and straightforward way, monitoring all answering emails and maintaining the communication when necessary.

CHAPTER III – RESULTS

This chapter will study, correct and analyse the results from the questionnaire carried out between 26/12/2017 and 20/01/2017. Firstly, invalid entries, incomplete answers, blank gaps or additional errors will be singled and eked out. Then, the corrected results will be examined at a general level, according to question and topic. Lastly, there will be an attempt at drawing conclusions from these results according to the theoretical information explored before, since:

> Theory is important to the social researcher because it provides a backcloth and rationale for the research that is being conducted. It also provides a framework within which social phenomena can be understood and the research findings can be interpreted (Bryman, 2008, p. 6).

This will hopefully lead to an understanding of the reality of translators with disabilities and their current use of technology in Europe.

III.1. DATA CORRECTION

At the beginning of the final phase of result analysis, it is important to study the answers submitted by respondents first (see Appendix F). Often there may be invalid entries, incomplete answers, blank gaps or additional errors. In this scenario, the researcher will need to analyse and correct necessary data.

In this study, there were a total of 35 entries, of which one was a test entry, done during the pre-testing phase and which should be ignored in the result analysis), and eight were invalid submissions, so only 26 entries were taken into consideration. In every study, there are factors of elimination, and in this study the most important ones were:

- The respondent not having any disabilities, since this is a study on translators with disabilities, which led to the elimination of three submissions;
- The respondent not being European; this study's target audience is centred in Europe, either as the continent of birth or the continent they live in, which eliminated three more submissions;
- The respondent's disability or activity difficulty being temporary (this amounted to one elimination);
- The disability or activity difficulty not falling within any of the categories explained in Chapter I (elimination of one respondent). This research focuses on longstanding issues, even if some can be applied to temporary difficulties. It is also centred around specific issues that may hinder the translation process,

explained in Chapter I. General health issues that do not specify how they are included in the categories previously indicated cannot be considered for this study (such as heart issues, diabetes, and similar health problems).

Even though *Google Forms* allows the researcher to delete entries if they do not qualify, it does not allow for responses to be edited (such as misconstrued responses, wrongly submitted replies, or misplaced answers). Thus, any type of alterations need to be made directly within the downloadable *MS Excel* file.

In order to have proper results for analysis, especially when displayed in graphs, misconstrued responses need to be corrected and homogenised. For instance, in the introductory section, while choosing the question format for "Nationality" or "Country you live in", both open questions, a drop-down option, and checkboxes were thought of. However, since there are currently 195 countries in the world (even if the study is focused on European translators, they could have been born in other continents, or been born in Europe and currently work in other continents), the checkboxes option would lengthen the questionnaire too much, the drop-down option would require the input of 195 countries as possible answers, which proves impractical for the researcher, since the number of respondents expected was very low, and, as such, an open question was chosen. Still, even after all these various considerations, there were errors in the results, such as respondents answering "French" and others "Française", some answering "Austria" and others "Austrian", or "Netherlands", while others submitted "the Netherlands". There was even an instance of a city ("Bordeaux") being submitted under "Country you live in".

Regarding misplaced answers, the researcher needs to be certain that they are included in the right category and eliminated from the wrong one. For instance, there were respondents that included software ("*Jaws*") or hardware ("Braille display") examples in the furniture/workplace equipment section.

There may also be non-considerable answers, like answering negatively, and then continuing answering the following questions on that topic that are tailored for positive answers; adding personal opinions to checkbox questions; replying positively to requiring special equipment, and then specifying that it is ordinary equipment; selecting special workplace equipment, but when asked to specify, naming hardware equipment unrelated to the previous options; and specifying the previous options by repeating the options, with no added specific information.

Following these alterations, and now with a corrected *MS Excel* file (see Appendix G) with viable results, it is possible to create graphs and analyse the responses in depth.

III.2. RESULT ANALYSIS

After thoroughly studying the results and making any necessary corrections, it is necessary to compare results and analyse variables, which is made easier by creating graphs with the corresponding numbers or percentages. The following sub-chapters will examine the different answers and consequent graphs in order for us to have an understanding of the reality of translators with disabilities and their use of technology. Only the top percentages and crucial graphs will be displayed below, but all graphs are available in Appendix H.

As previously stated, this study focuses on translators with disabilities in Europe. Of the total number of entries (26), the nationalities that contributed the most to the empirical data of this research were German (7), French (5) and Austrian (3). The results are identical with regard to the residence information, as observed in the following table:

1. Nationality:	**Number of respondents:**	**2. Country you live in:**	**Number of respondents:**
German	7	Germany	7
French	5	France	5
Austrian	3	Austria	3
Italian	2	Italy	2
Dutch	2	Netherlands	2
Czech	2	Czech Republic	2
Portuguese	1	Portugal	1
Estonian	1	Estonia	1
Slovak	1	Slovakia	1
Slovene	1	Slovenia	1

British	1	Monaco	1

Table 1 – Comparison of Results of Question 1 and Question 2 of the Questionnaire (Questionnaire Results, 2018).

These results may be due to different factors, which include more members with disabilities in German, French, and Austrian translation associations, more people interested in filling in the questionnaire in these countries, or even more people with the means to do so.

Regarding the respondents' age, the range between 26-35 and the range between 36-45 share the same percentage of 26.9%, which equates to the most significant age of employment and professional stability. The respondents younger than 25 and those with ages between 46-55 share the same percentage of 19.2%, the first one being the most frequent age range of attendance in higher education. The results show that there are translators with disabilities within retirement age still performing translation services (3.8%), which indicates that it is a career choice accessible to any employable age.

There were 65.4% respondents of the female gender and 36.6% of the male gender. Even though the questionnaire was gender-inclusive, by adding the "other" option, no other genders were chosen. The results may indicate that there are more female translators with disabilities, or that there are more people of the female gender interested in taking part in this type of research, or both, that is, more female translators with disabilities and more female translators interested in this research. This data is displayed in the graph below:

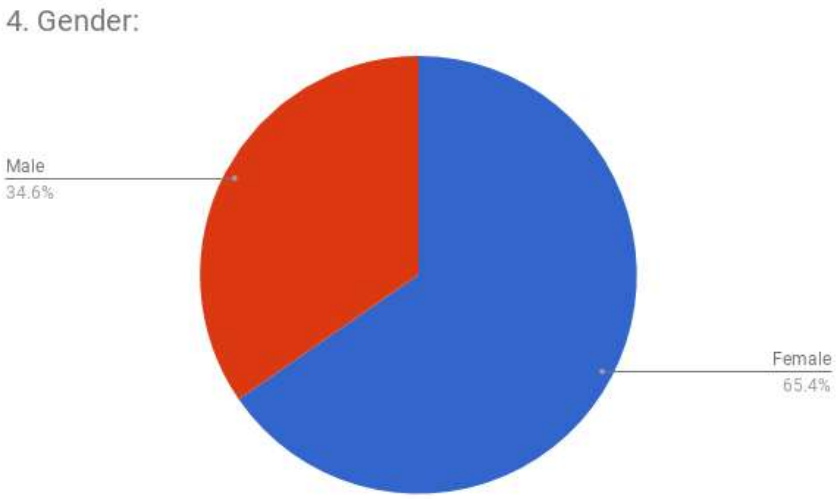

Figure 11 – Results from Question 4 in Percentages (%) on Gender (Questionnaire Results, 2018).

Regarding the professional situation, nearly all respondents work as freelancers (96.2%), conversely only 3.8% are in an internship. Out of the total, 57.7% work full-time, 19.2% part-time, and 23.1% only work occasionally. 96.2% work mainly from home, and only 3.8% practice in an office of a company or organisation. The lack of in-house translators with disabilities in either the public or private sector, and the fact that nearly all respondents work from home, indicate that it may be due to the stigma involved in hiring disabled people, or the lack of working conditions, or even both, despite there being laws promoting inclusivity within the labour market.

As to the years of activity in translation, the results are displayed in the following graph:

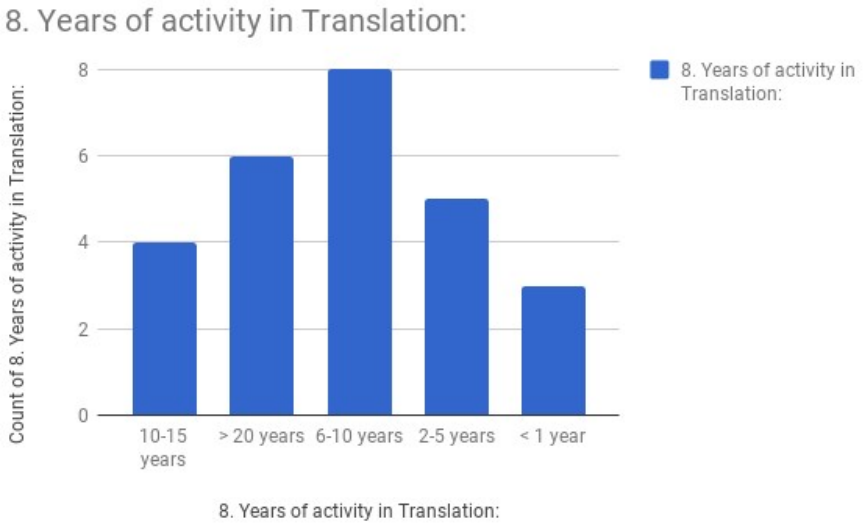

Figure 12 – Results from Question 8 on Years of Activity in Translation (Questionnaire Results, 2018).

As can be observed in the previous graph, eight respondents have between 6 and 10 years of experience in this profession, six have more than 20 years of experience, and only three have less than one year of experience. Therefore, it can be concluded that it is a profession accessible to a person with disabilities for many years. This fact could already be discernible through the data related to the respondents' age range, as explained previously.

In relation to qualifications in translation, most (15) are Master's graduates in translation, which implies that some may have specialised in other areas in their Bachelor's degree. Seven have a Bachelor's degree in translation or have completed a training course in this area, only two respondents finished a post-graduate course in translation, and only one has a translation doctorate.

However, it is interesting to remark that there are respondents (6) with no translation degree whatsoever, but who still practice translation at a professional level. This may be due to the fact that translation is a fairly recent academic course in higher education, and according to potential clients and job offers, a person can practice translation services with only 3-5 years of experience (Gouadec, 2007, p. 159). However, nowadays it is very important to have the proper academic qualifications:

> Qualifications and training are a decisive factor: as employers are generally aware of which courses lead to which professional profiles, they will often consider that students from such or such university do meet their specific requirements and have all the necessary skills and competences – if only because they've had the opportunity to judge from the performance of trainees and *alumni*. Graduating from a university with a strong reputation for being 'professionally-oriented' is as good as getting tons of certification. (Gouadec, 2007, p. 157)

Specialties are important in a translator's career, because they will determine potential clients and the number of job offers available. The graph below shows the specialties chosen by the respondents:

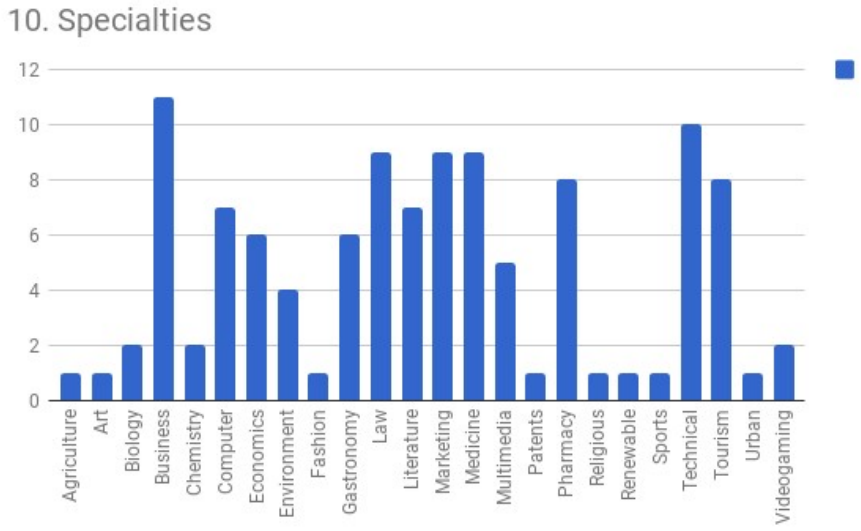

Figure 13 – Results from Question 10 on Specialties (Questionnaire Results, 2018).

The top-chosen specialties were Business (11 respondents); Technical documentation (10); Law, Marketing and Medicine, each selected by 9 respondents; Pharmacy, and Tourism selected by 8 respondents. It is interesting to notice that these specialties are areas described as "core areas, for example financial, medical, legal, pharmaceutical, IT, patents, etc." (McKay, 2013). This may be due to concerns regarding available job offers and pay conditions, since it is important "to make sure that your target specialization generates enough paying work for you to have a viable business" (McKay, 2013).

In order for us to understand the categories of disabilities that will most influence this research and its results, the following graph should be studied:

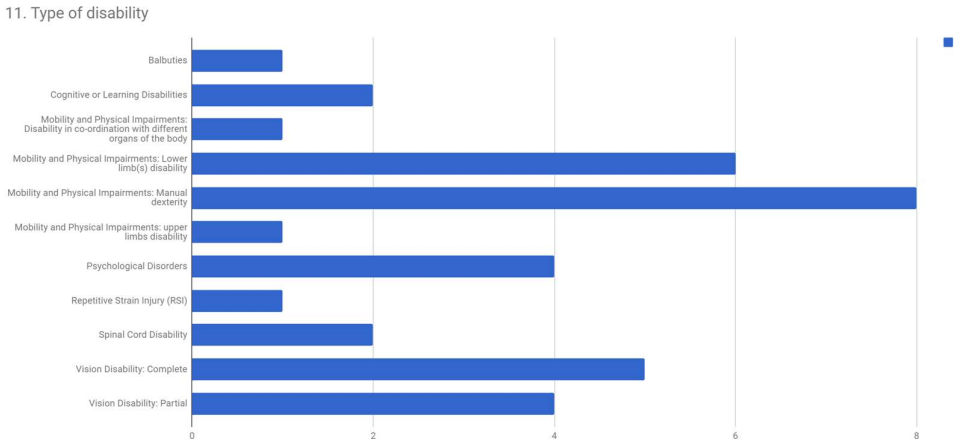

Figure 14 – Results from Question 11 on Type of Disability (Questionnaire Results, 2018).

As can be observed above, the category of Mobility and Physical Impairments was the most chosen, with a total of 16 respondents, split between Disability in coordination with different organs of the body (1); Lower limb(s) disability (6); Manual dexterity (8); and Upper limb(s) disability (1). Vision Disability was selected by a total of 9 respondents, divided by Complete (5) and Partial (4). There were also 4 respondents that selected Psychological Disorders, which can greatly affect the translation process. It is also interesting that one respondent added the option of Balbuties, which can be considered a speech impediment and may hinder the translation process, namely when using voice recognition software or similar programs. Since this is a multiple-choice question, some respondents can suffer from disorders that can be included in more than one of these categories, which can be observed in the Appendix G.

Within the topic of ergonomics, only 19.2% of the respondents affirmed the need for special furniture/workplace equipment in order to translate. Of these respondents, 3 chose special chairs, 3 special desks, 2 specific hand equipment and one added the option of an electric wheel-chair.

With regard to the practice of physical exercises to improve blood circulation and relax the muscles, the majority of the respondents answered positively (53.8%). Even though 11.5% responded negatively, but showed interest in starting to do so, an alarming percentage of the respondents (34.6%) showed no interest in doing this type of exercises. This may be due to the inability of some respondents to perform these physical activities, or to the lack of knowledge of the advantages of doing so, or being unaware of the available exercise routines and how to tailor them to their needs. It could also be due to a mix of all the previous reasons.

Within the topic of hardware devices, nearly half of the respondents (42.3%) declared the need for special hardware equipment in order to translate, of which 4 selected Braille reading devices, 4 special Keyboard, 3 special Screen and 3 Mouse: Trackballs, these being only the top choices.

Regarding operating systems and software, *Microsoft Windows* is the most used operating system at the workplace (92.3%). Out of the total, only 7.7% uses *macOS* system. Only 12 respondents work with *SDL-Trados/SDL Studio* as a CAT-Tool. *Across* occupies the second place (5 respondents). The remaining options were less preferred, as observed in the graph below:

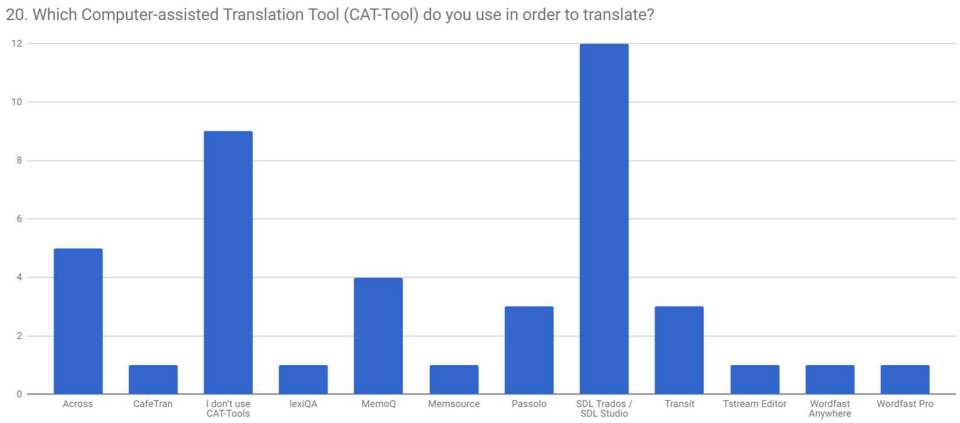

Figure 15 – Results from Question 20 on Use of CAT-Tool (Questionnaire Results, 2018).

It is interesting to observe that 9 respondents selected the non-use of CAT Tools. Perhaps because it is difficult and time-consuming to tailor each program to the user's

preferences or working with multiple software in tandem. And yet, as mentioned in Chapter I, when used, CAT Tools improve working conditions, comfort and time management in the translation task.

Most respondents (69.2%) stated that they do not use special software in order to translate. Nonetheless, 30.8% need these programs: 3 selected voice recognition software, 3 chose screen reader software, and 2 elected computer access software. When asked to specify, the software *Jaws*[21] was mentioned more than once. However, when questioned if these aforementioned software were used in tandem with CAT Tools, 50% responded positively, adding that CAT Tools do not function correctly. The respondents pointed out issues with *Jaws* within *SDL Trados* and *MemoQ*, for instance.

Out of all the answers, 65.4% do not require special layout optimisation (magnification or other options, as explained in the Chapter II.1.3.3.). Conversely, 34.6% do require these optimisation options: 5 respondents mention the need for magnification of text and visual stimuli; 3 for sound notifications for images; 3 for adaptation of keyboard shortcuts; 2 for narrative options; and one mentioned the need to switch off all 3D effects or shadows. However, 44.4% of the respondents affirmed that when working with CAT Tools, these layout options do not work correctly, namely magnification options in *SDL Trados*.

Of those questioned, most (69.2%) do not use voice recognition software, but 30.8% do, being *Dragon Naturally Speaking* the preferred program (87.5%). *Siri* and *Apple Dictation* were chosen by only 12.5% of the respondents. When used with CAT Tools, 37.5% of the respondents affirmed that their preferred voice recognition software works well, while 25% detected issues, namely when working with *Wordfast Anywhere*, *CafeTran*,[22] and *Tstream Editor*.[23]

To sum up, even if there were many corrections to be made and several entries to be eliminated, the data gathered through this questionnaire was crucial for this research and has proven fruitful. The results allowed for an attempt to be made regarding possible

[21] *Jaws* is a screen-reading software available for *Microsoft Windows*, initially released in 1995. For more information: http://www.freedomscientific.com/Products/Blindness/JAWS
[22] *CafeTran Expresso* is a CAT-Tool that works with various operating systems. For more information: https://www.cafetran.com/
[23] Tstream Editor is a private CAT-Tool from Xplanation. For more information: https://www.youtube.com/watch?v=hAz22FRf9VA

reasonings and conclusions, which may lead to further research in this area and these topics.

CONCLUSION

This dissertation is just the first much-needed step to open up this area to further exploration. It has fulfilled its purpose of researching and providing an understanding of the use of technology by translators with disabilities in Europe. With this research, it was possible to gather a sample of translators with disabilities in Europe, according to country, gender, age, disability, years of experience, professional situation, qualifications and specialties. These findings also made it possible to understand the preferences and choices of disabled translators with regard to the main research topics (ergonomics, hardware devices, operating systems and software, and voice recognition), namely their practice of physical exercises, the equipment/hardware devices/software required for their translation tasks, how these work in tandem with other factors, and any issues related to this process.

Even with a relatively reduced number of respondents (26), it was possible to draw preliminary conclusions and provide some understanding of the use of technology by translators with disabilities.

The results presented new options not previously considered by the researcher, such as the use of other special software options (*Jaws*) or CAT Tools (*CafeTran*). From a personal view, it is surprising how these translators coped with the challenges of their disabilities when translating, since the equipment studied in this research was created fairly recently. The percentage of respondents that showed no interest in doing exercises to better their workflow (34.6%) is also unanticipated, since these exercises can be applied to any condition to improve the translator's health, regardless of any activity difficulties. Regarding CAT Tools and their performance, there were some issues expressed when working in tandem with other programs; most complaints, however, were not detailed enough and the number of respondents is too low to understand the issues in depth.

There is still much to be studied within this area, such as how each different software works in tandem with other essential programs (advantages, disadvantages, limitations to be improved upon, possible solutions to issues observed, potential work-arounds, et al.), how translators with disabilities or with basic activity difficulties translate in real time (different points of view, difficulties felt, software used, work plans and schedules followed, et al.), exploring the working conditions within a translation agency or organization, since more than 95% of the respondents work from home, or further delve into and study the different topics approached by the questionnaire, with possible

interviews and tests. Many of the tools and equipment are fairly recent and translators play a very important role in their development, by exploring their reaches and limitations and by providing feedback in order to improve them.

Finally, although this dissertation constitutes contemporary research, by which it is to be understood as a study of the current situation of translators with disabilities and their current use of technology and its tools within their workplace, this questionnaire has made possible future historical research. Since about 23% of the translators answering the questionnaire have more than 20 years of experience in the field, and about 30% have between 6 and 15 years' experience, and since most of the respondents chose to add their e-mail address for further research, it may be possible to undergo studies focusing on how their translation process has developed throughout time, perhaps even comparing different countries or time periods, and not only from a technological point of view. This could bring results that may even improve the present situation within our professional area. This study is evidently focused on the use of technology, but there may be translators with disabilities or activity difficulties who do not make use of technological tools to translate. Further studies could explore this hypothesis and reveal different statistics and realities to be considered.

It is believed that this dissertation is a valid contribution to research in this area and to an understanding of the current accessibility in the translation world. Ultimately, this dissertation may help raise awareness of what is currently available regarding accessibility, and what can be done to improve this situation. It is hoped that other students or professionals in translation, particularly those with disabilities or those who may suffer from activity difficulties, use this study and its data in order to gain a better understanding of the current reality of this area and also to improve working conditions as much as possible.

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[24] The bibliography follows the rules of the APA style guide. For more information: http://www.apastyle.org/

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APPENDIX A

ESTATÍSTICAS SOBRE DEFICIÊNCIAS OU INCAPACIDADES (República Portuguesa: Gabinete de Estratégia e Planeamento, 2016)

APPENDIX B

QUESTIONNAIRE “DISABLED TRANSLATORS’ USE OF TECHNOLOGY: PRESENT REALITY AND FUTURE POSSIBILITIES” IN *GOOGLE FORMS*

REPÚBLICA PORTUGUESA
TRABALHO, SOLIDARIEDADE E SEGURANÇA SOCIAL

100 ANOS DE MINISTÉRIO 1916 - 2016

GABINETE DE ESTRATÉGIA E PLANEAMENTO

Estatísticas sobre Deficiências ou Incapacidades

1% da população em Portugal

não consegue ANDAR ou SUBIR degraus

27.659 indivíduos em Portugal

não consegue VER

3% da população em Portugal

tem muita dificuldade em TOMAR BANHO ou VESTIR-SE sozinho

9% da população em Portugal

tem muita dificuldade em VER

68.029 indivíduos em Portugal

não consegue COMPREENDER os outros ou FAZER-SE COMPREENDER

65% das pessoas com mais de 65 anos

e com pelo menos uma dificuldade são mulheres

5,5% da população em Portugal

tem muita dificuldade de MEMÓRIA ou CONCENTRAÇÃO

26.860 indivíduos em Portugal

não consegue OUVIR

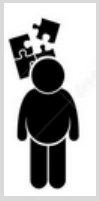
Pessoas com 65 e mais anos

representam **56%** da população com pelo menos uma dificuldade

13.950 pessoas com deficiência frequentam Centros de Atividades Ocupacionais da Rede de Serviços e Equipamentos Sociais

12.667 indivíduos com deficiência ou incapacidades estão registados como desempregados

78.175 crianças e alunos com necessidades especiais de educação frequentam escolas regulares de ensino



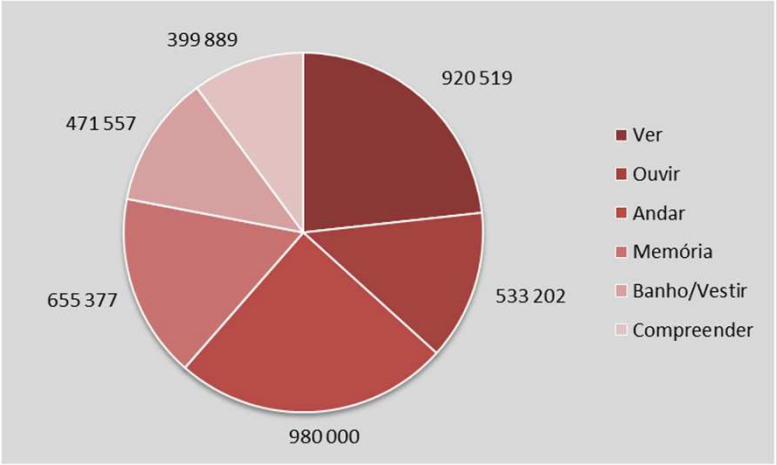
81% das crianças e alunos com necessidades especiais de educação frequentam o ensino básico

Estatísticas sobre Deficiências ou Incapacidades

População (2011)

As 6 dificuldades questionadas nos CENSOS 2011 são: ver; ouvir; andar ou subir degraus; memória ou concentração; tomar banho ou vestir-se sozinho; compreender os outros ou fazer-se compreender.

População por tipo de dificuldade

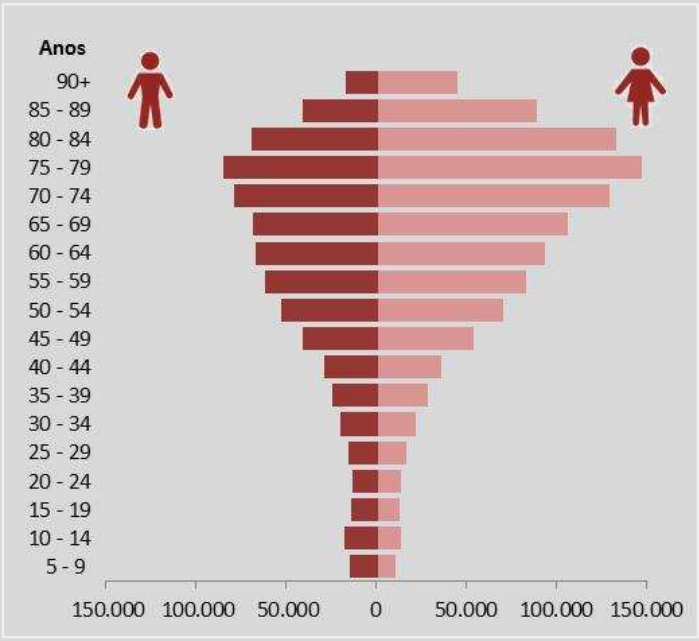


Fonte: INE (Censos 2011)

A dificuldade com incidência mais relevante na população relaciona-se com o andar: 980 mil pessoas, com pelo menos uma dificuldade, não conseguem ou têm muita dificuldade em andar.

1,5% da população portuguesa não consegue tomar banho ou vestir-se sozinha; 1,0% não consegue andar; 1,0% não consegue memorizar ou concentrar-se; 0,7% não consegue compreender os outros ou fazer-se compreender; 0,3% não consegue ver e 0,3% não consegue ouvir.

População residente (com 5 ou mais anos), com pelo menos uma dificuldade, por grupo etário e sexo



Fonte: INE (Censos 2011)

O número de pessoas com pelo menos uma dificuldade na realização das atividades do seu dia-a-dia aumenta com a idade.

Da população com pelo menos uma dificuldade, os indivíduos do sexo masculino estão em maioria somente nos segmentos mais jovens, até aos 19 anos. Os restantes grupos etários são, predominantemente, constituídos por mulheres.

População residente (15 ou mais anos) que não consegue efetuar uma ação, por condição perante a atividade económica e por sexo

	Não consegue ver			Não consegue ouvir			Não consegue andar ou subir degraus		
	Homens	Mulheres	Total	Homens	Mulheres	Total	Homens	Mulheres	Total
Portugal	**11.623**	**15.392**	**27.015**	**11.080**	**15.088**	**26.168**	**36.674**	**66.429**	**103.103**
População ativa	**2.601**	**1.855**	**4.456**	**3.391**	**2.629**	**6.020**	**2.220**	**1.680**	**3.900**
Empregados	2.269	1.545	3.814	2.846	2.125	4.971	1.931	1.391	3.322
Desempregados	332	310	642	545	504	1.049	289	289	578
População inativa	**9.022**	**13.537**	**22.559**	**7.689**	**12.459**	**20.148**	**34.454**	**64.749**	**99.203**
Estudantes	199	186	385	248	231	479	319	299	618
Domésticos	25	398	423	41	679	720	29	572	601
Reformados, aposentados ou na reserva	7.006	11.133	18.139	5.860	9.935	15.795	27.533	57.060	84.593
Incapacitados permanentes para o trabalho	1.350	1.291	2.641	941	994	1.935	5.767	5.347	11.114
Outros casos	442	529	971	599	620	1.219	806	1.471	2.277

	Não consegue memorizar ou concentrar-se			Não consegue tomar banho ou vestir-se sozinho			Não compreende os outros ou não se faz compreender		
	Homens	Mulheres	Total	Homens	Mulheres	Total	Homens	Mulheres	Total
Portugal	**35.874**	**61.593**	**97.467**	**52.060**	**90.508**	**142.568**	**25.597**	**39.907**	**65.504**
População ativa	**6.128**	**7.452**	**13.580**	**1.920**	**1.590**	**3.510**	**3.324**	**2.653**	**5.977**
Empregados	4.782	5.692	10.474	1.678	1.323	3.001	2.666	2.043	4.709
Desempregados	1.346	1.760	3.106	242	267	509	658	610	1.268
População inativa	**29.746**	**54.141**	**83.887**	**50.140**	**88.918**	**139.058**	**22.273**	**37.254**	**59.527**
Estudantes	852	813	1.665	368	326	694	394	329	723
Domésticos	83	2.080	2.163	35	637	672	67	758	825
Reformados, aposentados ou na reserva	20.511	42.610	63.121	40.415	78.405	118.820	14.959	29.751	44.710
Incapacitados permanentes para o trabalho	6.604	6.141	12.745	8.343	7.581	15.924	5.701	5.021	10.722
Outros casos	1.696	2.497	4.193	979	1.969	2.948	1.152	1.395	2.547

Fonte: INE (Censos 2011)

Estatísticas sobre Deficiências ou Incapacidades

Educação/Ensino (2015/2016)

Crianças e alunos com necessidades especiais de educação a frequentarem escolas regulares de ensino, por nível de educação e ensino, no Continente

Total	**78.175**	**100%**
Educação pré-escolar	**3.573**	**4,6%**
Ensino básico	**63.540**	**81,3%**
1.º ciclo	**21.759**	**27,8%**
2.º ciclo	**17.509**	**22,4%**
3.º ciclo	**24.272**	**31,0%**
Ensino secundário	**11.062**	**14,2%**

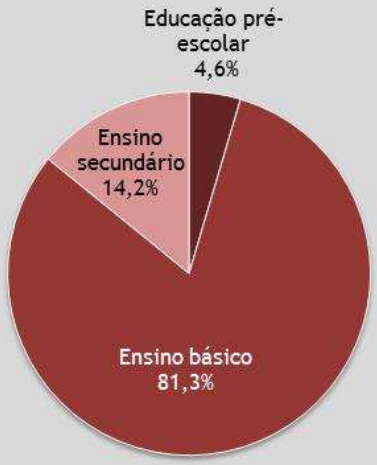
Fonte: DGEEC /MEC

No ano letivo 2015/2016, existiam mais de 78 mil crianças e alunos com necessidades especiais de educação, com Programa Educativo Individual ao abrigo do Decreto-Lei n.º 3/2008, de 7 de janeiro.

81% das crianças com necessidades especiais frequentavam o ensino básico (21 mil no 1º ciclo, 17 mil no 2º ciclo e 24 mil no 3º ciclo).

A proporção de crianças inscritas no pré-escolar com necessidades especiais era de 4,6%, mas este número está subavaliado uma vez que este segmento é registado pelo Sistema Nacional de Intervenção Precoce na Infância (SNIPI), não estando refletida a totalidade nos resultados apresentados.

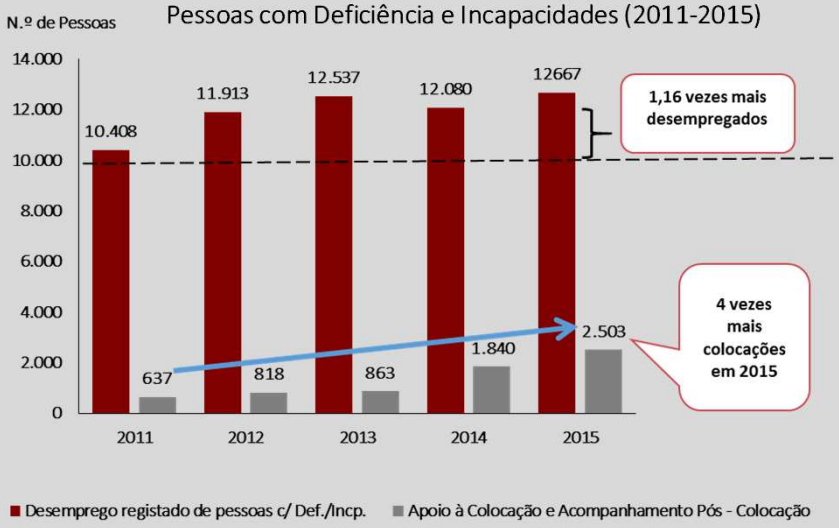
Proporção de crianças e alunos com necessidades especiais por nível de educação e ensino, no total de crianças e alunos com necessidades especiais



Fonte: DGEEC /MEC

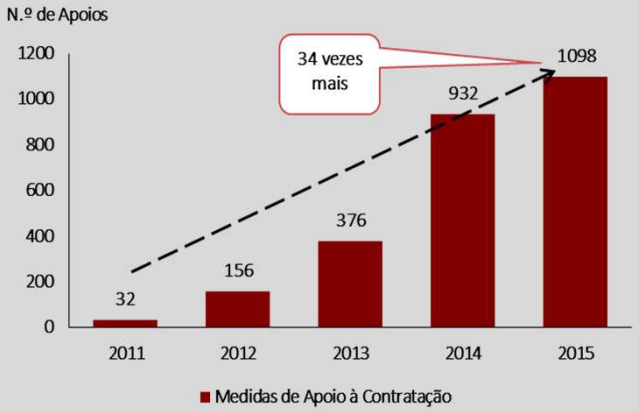
Mercado de Trabalho (2011-2015)

Evolução do Desemprego Registado e das Colocações de Pessoas com Deficiência e Incapacidades (2011-2015)



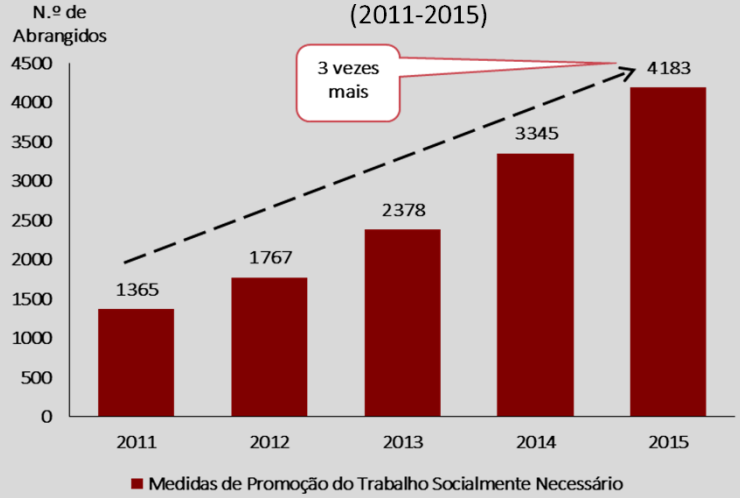
Fonte: IEFP /MTSSS

Apoios à Contratação de Pessoas com Deficiência e Incapacidades (2011-2015)



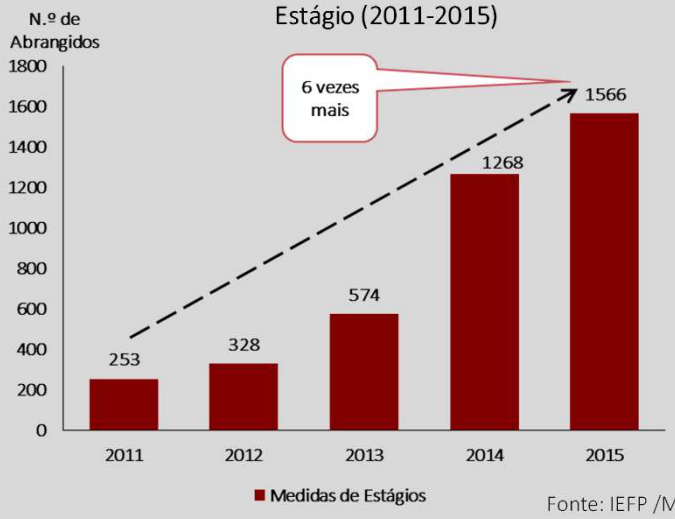
Fonte: IEFP /MTSSS

Pessoas com Deficiência e Incapacidades a Desenvolver Trabalho Socialmente Necessário (2011-2015)



Fonte: IEFP /MTSSS

Transição para a Vida Ativa – N.º de Pessoas com *Deficiência e Incapacidades* Abrangidas em Medidas de Estágio (2011-2015)



Fonte: IEFP /MTSSS

Estatísticas sobre Deficiências ou Incapacidades

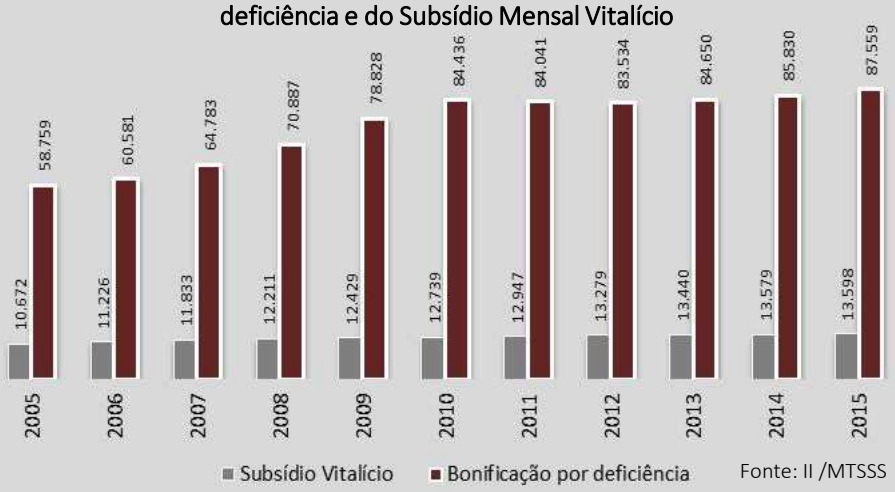
Prestações Sociais (2005-2015)

Em 2015, o número de titulares do Subsídio Mensal Vitalício, dirigido às pessoas com deficiência com idade superior a 24 anos, era acima dos 13 mil indivíduos, mais 6,7% do que em 2010 e mais 27,4% do que em 2005.

52,1% dos beneficiários desta prestação eram do sexo masculino.

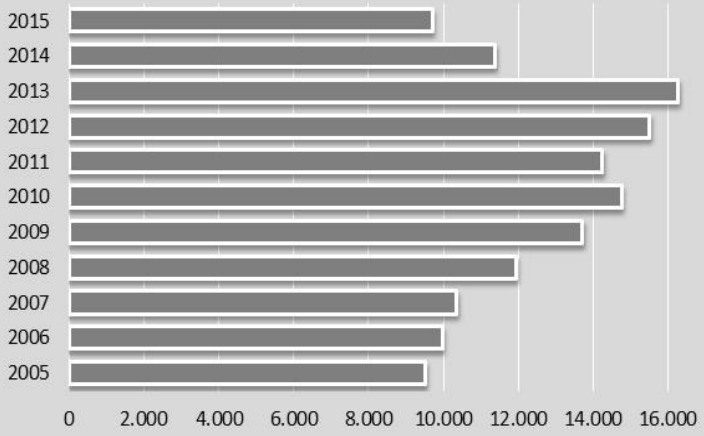
O valor do Subsídio Mensal Vitalício é 176,76€, fixado pela Portaria n.º 511/2009, de 14 de Maio.

Nº de titulares da Bonificação do abono de família para crianças e jovens com deficiência e do Subsídio Mensal Vitalício



Fonte: II /MTSSS

Nº de titulares do Subsídio por Educação Especial



Fonte: II /MTSSS

Em 2015, existiam mais de 87 mil beneficiários da Bonificação do Abono de Família para Crianças e Jovens com Deficiência, mais 3,7% do que em 2010 e mais 49% do que em 2005.

62% dos beneficiários desta prestação eram do sexo masculino.

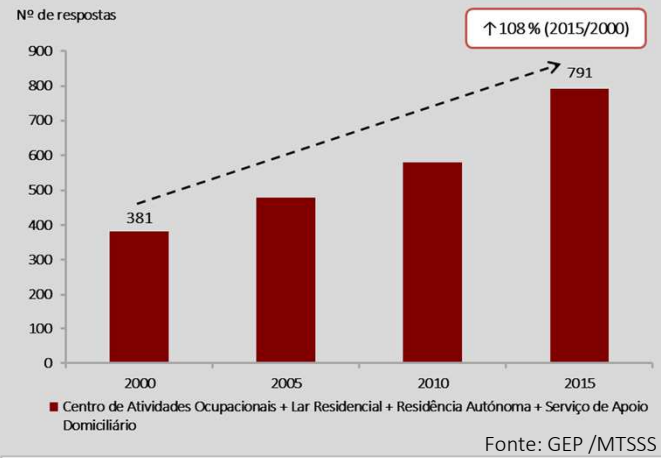
De acordo com a Portaria n.º 161/2016, de 9 de junho, os montantes da Bonificação do Abono de Família para Crianças e Jovens com Deficiência são: i) 61,26€ até aos 14 anos; ii) 89,22€ dos 14 aos 18 anos; iii) 119,44€ dos 18 aos 24 anos.

O Subsídio por Educação Especial é uma prestação pecuniária, paga mensalmente, que se destina a assegurar a compensação de encargos resultantes da aplicação de formas específicas de apoio a crianças e jovens até aos 24 anos com deficiência (Decreto Regulamentar n.º 3/2016, de 23 de agosto).

Em 2015, eram 9716 beneficiários desta prestação, 66,3% dos quais do sexo masculino. Face a 2010, existiram menos 34,2% beneficiários e mais 2% face a 2005.

Respostas Sociais (2000-2015)

Respostas sociais para pessoas c/deficiência, 2000-2015

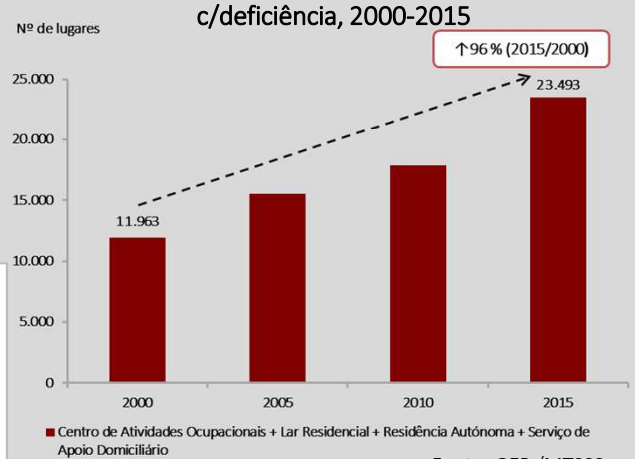


Fonte: GEP /MTSSS

Em 2015, contabilizaram-se em Portugal Continental 791 respostas sociais (Centro de Atividades Ocupacionais, Lar Residencial, Residência Autónoma e Serviço de Apoio Domiciliário) do âmbito da Rede de Serviços e Equipamentos Sociais (RSES), dirigidas a pessoas com deficiência, que se traduziram em mais de 23 mil lugares disponíveis.

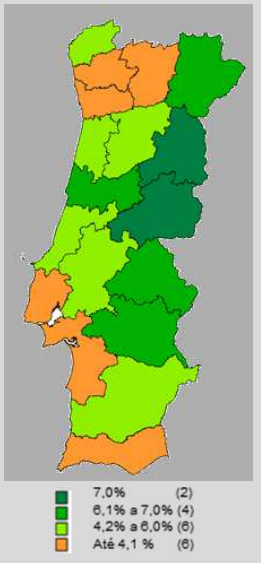
Em 2015, a taxa de cobertura média no Continente das principais respostas sociais de apoio a pessoas com deficiência fixou-se em 4,1 %. Doze distritos registaram uma cobertura acima da média.

Capacidade das respostas sociais para pessoas c/deficiência, 2000-2015



Fonte: GEP /MTSSS

Taxa de Cobertura das principais respostas sociais para pessoas c/deficiência, 2015



Fonte: GEP /MTSSS

Para mais informações:

Gabinete de Estratégia e Planeamento do Ministério do Trabalho, Solidariedade e Segurança Social (GEP/MTSSS)

Praça de Londres, nº 2 - 5º andar, 1049 - 056 Lisboa ☎ 21 595 33 00 - Internet: http://www.gep.msess.gov.pt

Lisboa, 5 de dezembro de 2016

APPENDIX B

QUESTIONNAIRE “DISABLED TRANSLATORS’ USE OF TECHNOLOGY: PRESENT REALITY AND FUTURE POSSIBILITIES” IN *GOOGLE FORMS*

Questionnaire — Disabled translators' use of technology: present reality and future possibilities

My name is Priscila Patatas and I'm a Master's student in Translation at the Nova University of Lisbon, in Portugal. I am currently working on my final dissertation on "Disabled translators' use of technology: present reality and future possibilities". Although it is a very important area in our profession, there is much to be explored. As such, I would like to ask for your assistance completing this questionnaire. It would provide realistic and updated data and will prove invaluable to the study in question.

Thank you in advance for your attention and dedication.

This questionnaire is open now and will close at midnight on the 20th January 2018. It will take 20-30 minutes to complete and all responses will be treated confidentially, unless you authorise otherwise. By completing this questionnaire, you authorise the use, collection, study and publication of any information you have entered, anonymously or not.

1. Nationality: *

Colour palette

Short-answer text

2. Country you live in: *

Short-answer text

3. Age: *

- < 25
- 26-35
- 36-45
- 46-55
- 56-65
- > 65

4. Gender: *

- Freelancer
- Intern
- Salaried translator with contract in private sector
- Salaried translator with contract in public sector
- Closed activity/ Retired

6. Professional situation: *

- Part-time
- Full-time
- Occasional
- Closed activity/ Retired

Colour palette

7. Where is your main place of work? *

- At home
- In an office of a company or organization
- At a coworking space

8. Years of activity in Translation: *

- < 1 year
- 2-5 years
- 6-10 years
- 10-15 years
- 15-20 years
- > 20 years

- [ ] Master's degree in translation
- [ ] Doctorate degree in translation

10. Specialties (choose all that may apply):

- [ ] Architecture
- [ ] Art
- [ ] Biology
- [ ] Business
- [ ] Chemistry
- [ ] Computer Science
- [ ] Economics and Finances
- [ ] Environment
- [ ] Fashion
- [ ] Gastronomy
- [ ] Law
- [ ] Literature
- [ ] Marketing
- [ ] Medicine
- [ ] Multimedia
- [ ] Patents
- [ ] Pharmacy
- [ ] Religious
- [ ] Technical documentation
- [ ] Tourism

- [ ] Mobility and Physical Impairments: Lower limb(s) disability
- [ ] Mobility and Physical Impairments: Manual dexterity
- [ ] Mobility and Physical Impairments: Disability in co-ordination with different organs of the body
- [ ] Spinal Cord Disability
- [ ] Head Injuries - Brain Disability: Acquired Brain Injury (ABI)
- [ ] Head Injuries - Brain Disability: Traumatic Brain Injury (TBI)
- [ ] Vision Disability: Partial
- [ ] Vision Disability: Complete
- [ ] Cognitive or Learning Disabilities
- [ ] Psychological Disorders
- [ ] Other...

Colour palette

After section 1 **Continue to next section**

Section 2 of 6

Ergonomics

Description (optional)

12. Do you require special furniture/workplace equipment in order to translate? *

- ( ) Yes
- ( ) No (please, go to question 15)

13. If you replied “yes” to question 12, which type (choose all that may apply)?

- [ ] Desk

14. In case of "yes" in question 12, please list the equipment (please be as specific as possible):

Long-answer text

15. Have you done exercises to improve mobility and stimulate relaxation? *

- Yes
- No, but I intend to do so
- No, and I don't intend to do so

After section 2 **Continue to next section**

Section 3 of 6

Colour palette

Hardware devices

Description (optional)

16. Do you require special hardware equipment in order to translate? *

- Yes
- No (please, go to question 19)

17. If you replied "yes" to question 16, which type (choose all that may apply)?

- [ ] Automatic Page Turners
- [ ] Braille reading devices
- [ ] Headphones
- [ ] Integrated Powered Mobility Controls

- [ ] Mouse control via head movement only
- [ ] Mouse control via eye movement only
- [ ] Mouse control via sip/puff mouth actions
- [ ] Screen
- [ ] Speech generating devices
- [ ] Other...

18. Please list the equipment selected previously (please be as specific as possible):

Long-answer text

After section 3 **Continue to next section**

Colour palette

Section 4 of 6

Operating systems and software

Description (optional)

19. Which operating system do you use in order to translate? *

- ( ) Android
- ( ) Linux
- ( ) macOS
- ( ) Microsoft Windows
- ( ) Other...

20. Which Computer-assisted Translation Tool (CAT-Tool) do you use in order to translate (choose all that may apply)? *

- [ ] Helium
- [ ] HyperHub
- [ ] Idiom
- [ ] Idiom Worldserver
- [ ] LocStudio
- [ ] MemoQ
- [ ] MS Leaf
- [ ] Passolo
- [ ] SDL Trados / SDL Studio
- [ ] Transit
- [ ] Wordfast Anywhere
- [ ] Wordfast Pro
- [ ] Other...

Colour palette

21. Do you require special software installed in order to translate? *

- ( ) Yes
- ( ) No (please, go to question 26)

22. If you replied “yes” to question 21, which type (choose all that may apply)?

- [ ] Computer access software
- [ ] One-handed typing tutor
- [ ] Screen enlargement software
- [ ] Switch training programs
- [ ] Voice recognition software
- [ ] Word prediction software

24. Do you use the aforementioned special software within your CAT-Tools?

- ( ) Yes, and all work with all CAT-Tools
- ( ) Yes, but they don't work with all CAT-Tools
- ( ) No, I don't use CAT-Tools
- ( ) No, I don't use special software
- ( ) No, I don't use special software within CAT-Tools

25. If you replied "yes" to question 24, but they fail to work in all CAT-Tools, please specify the exceptions (program and CAT-Tool):

Long-answer text

26. Do you require special layout optimisation (magnificatior Colour palette s) in order to translate? *

- ( ) Yes
- ( ) No (please, go to question 30)

27. If you replied "yes" to the question 26, which type (choose all that may apply)?

- [ ] Adaptation of keyboard shortcuts
- [ ] Magnification of text and visual stimuli
- [ ] Narrator option
- [ ] Sound notifications for images
- [ ] Visual notifications for sounds
- [ ] Other...

28. Do you use the aforementioned layout options within your CAT-Tools?

- ( ) Yes, and all work with all CAT-Tools

29. If you replied “yes” to question 28, but they fail to work in all CAT-Tools, please specify the exceptions (option and CAT-Tool):

Long-answer text

After section 4 **Continue to next section**

Section 5 of 6

Voice Recognition

Description (optional)

30. Do you use Voice Recognition software in order to translate? *

- Yes
- No (please, go to the end)

Colour palette

31. If you replied “yes” to question 30, which type of software (choose all that may apply)?

- [ ] Braina Pro
- [ ] Dragon Naturally Speaking
- [ ] Google Web Speech API
- [ ] Siri and Apple Dictation
- [ ] Other...

32. Do you use the aforementioned Voice Recognition software within your CAT-Tools?

- Yes, and all work with all CAT-Tools
- Yes, but they don’t work with all CAT-Tools

Long-answer text

After section 5 Continue to next section

Section 6 of 6

You have completed questionnaire.

Thank you very much for your time and dedication. If you are willing to contribute further to this research, and be contacted for possible interviews to expand on some of the themes discussed here, please leave your email address:

Email:

Short-answer text

Colour palette

APPENDIX C

QUESTIONNAIRE DRAFT TO "DISABLED TRANSLATORS' USE OF TECHNOLOGY: PRESENT REALITY AND FUTURE POSSIBILITIES"

QUESTIONNAIRE DRAFT

OA – Open answer

Nationality: (OA)	
Country of employment: (OA)	
Age:	□ < 25 □ 26-35 □ 36-45 □ 46-55 □ 56-65 □ > 65
Gender:	□ Male □ Female □ Other
Professional situation:	□ Freelancer □ Intern □ Salaried translator with contract in private sector □ Salaried translator with contract in public sector (Sub-question to all above: Part-time/Full-time/occasional) □ Closed activity
Translating experience:	□ < 1 year □ 2-5 years □ 6-10 years □ 10-15 years

	□ 15-20 years □ > 20 years
Educational qualifications in Translation (select all that may apply):	□ No translation degree □ Training course □ Bachelor's degree □ Post-graduate course □ Master's degree □ Doctorate degree
Specialties (choose all that may apply):	□ Architecture □ Art □ Biology □ Business □ Chemistry □ Computer Science □ Economics and Finances □ Environment □ Fashion □ Gastronomy □ Law □ Literature □ Marketing □ Medicine □ Multimedia □ Patents □ Pharmacy □ Religious □ Technical documentation □ Tourism □ Urban Planning □ Videogaming

	☐ Other: (OA)
Type of disability:	☐ Mobility and Physical Impairments: Upper limb(s) disability ☐ Mobility and Physical Impairments: Lower limb(s) disability ☐ Mobility and Physical Impairments: Manual dexterity ☐ Mobility and Physical Impairments: Disability in co-ordination with different organs of the body ☐ Spinal Cord Disability ☐ Head Injuries - Brain Disability: Acquired Brain Injury (ABI) ☐ Head Injuries - Brain Disability: Traumatic Brain Injury (TBI) ☐ Vision Disability: Partial ☐ Vision Disability: Complete ☐ Cognitive or Learning Disabilities ☐ Psychological Disorders ☐ Other. Specify: (OA)
Ergonomics Do you require special furniture/workplace equipment in order to translate?	☐ Yes ☐ No

In case of yes, which type (choose all that may apply)? Have you done exercises to improve mobility and stimulate relaxation?	□ Desk. Specify: (OA) □ Chair. Specify: (OA) □ Leg rest. Specify: (OA) □ Arm rest. Specify: (OA) □ Hand equipment. Specify: (OA) □ Other. Specify: (OA) □ Yes □ No, but I intend to do so □ No, and I don't intend to do so
Hardware devices Do you require special hardware devices in order to translate? In case of yes, which type (choose all that may apply)?	□ Yes □ No □ Automatic Page Turners. Specify: (OA) □ Braille reading devices. Specify: (OA) □ Headphones. Specify: (OA) □ Integrated Powered Mobility Controls. Specify: (OA) □ Keyboard. Specify: (OA) □ Microphone. Specify: (OA) □ Mouse. (Sub-question: Trackballs/ Joysticks/ Mouse control using a switch and any reliable body part movement/ Mouse control via head movement only/

	Mouse control via eye movement only/ Mouse control via sip/puff mouth actions/Other) □ Other. Specify: (OA) □ Screen. Specify: (OA) □ Speech generating devices. Specify: (OA)
Operating systems and software Which operating system do you use in order to translate? Which Computer-assisted Translation Tool (CAT-Tool) do you use in order to translate (choose all that may apply)?	□ Android □ Linux □ macOS □ Microsoft Windows □ Other. Specify: (OA) □ I don't use CAT-Tools □ Across □ Alchemy Catalyst □ Déjà vu □ Helium □ HyperHub □ Idiom □ Idiom Worldserver □ LocStudio □ MemoQ □ MS Leaf □ Passolo □ SDL Trados/ SDL Studio □ Transit □ Wordfast Anywhere □ Wordfast Pro

	☐ Other: (OA)
Do you require special software installed in order to translate?	☐ Yes ☐ No
In case of yes, which type (choose all that may apply)?	☐ Computer access software. Specify: (OA) ☐ One-handed typing tutor. Specify: (OA) ☐ Screen enlargement software. Specify: (OA) ☐ Switch training programs. Specify: (OA) ☐ Voice recognition software. Specify: (OA) ☐ Word prediction software. Specify: (OA) ☐ Other. Specify: (OA)
Do you use the aforementioned special software within your CAT-Tools?	☐ Yes, and all work with all CAT-Tools ☐ Yes, but they don't work with all CAT-Tools. Specify the exceptions (program and CAT-Tool): ☐ No, I don't use CAT-Tools ☐ No, I don't use special software

	☐ No, I don't use special software within CAT-Tools
Do you require special layout optimisation in order to translate?	☐ Yes ☐ No
In case of yes, which type (choose all that may apply)?	☐ Adaptation of keyboard shortcuts ☐ Magnification of text and visual stimuli ☐ Narrator option ☐ Sound notifications for images ☐ Visual notifications for sounds ☐ Other. Specify: (OA)
Do you use the aforementioned layout options within your CAT-Tools?	☐ Yes, and all work with all CAT-Tools ☐ Yes, but they don't work with all CAT-Tools. Specify the exceptions (option and CAT-Tool): ☐ No, I don't use CAT-Tools ☐ No, I don't use special layout options ☐ No, I don't use special layout options within CAT-Tools
Voice Recognition	

Do you use Voice Recognition software in order to translate?	□ Yes □ No
In case of yes, which type of software (choose all that may apply)?	□ Braina Pro □ Dragon Naturally Speaking □ Google Web Speech API □ Siri and Apple Dictation □ Other. Specify: (OA)
Do you use the aforementioned Voice Recognition software within your CAT-Tools?	□ Yes, and all work with all CAT-Tools □ Yes, but they don't work with all CAT-Tools. Specify the exceptions (program and CAT-Tool): □ No, I don't use CAT-Tools □ No, I don't use voice recognition software □ No, I don't use voice recognition software within CAT-Tools
You've completed questionnaire. Thank you very much for your time and dedication. If you wish to further contribute to this research, and wish to be contacted for possible interviews to expand on some of the themes here discussed, kindly leave your email address:	Email: (OA)

APPENDIX D

LIST OF EUROPEAN TRANSLATION ASSOCIATIONS CONTACTED TO DISSEMINATE THE QUESTIONNAIRE

LIST OF EUROPEAN TRANSLATION ASSOCIATIONS CONTACTED[1]

(ATA) – American Translators Association

Country	Association	Website	Contact
Albania	AITA - Albanian Interpreters & Translators Association	https://www.facebook.com/aitaipsp/	info@aita-ipsp.org
Andorra	- (ATA)	-	
Armenia	- (ATA)	-	
Austria	1. ACCI - Austrian Association of Certified Court Interpreters . 2. Austrian Interpreters and Translators Association 3. Austrian Association of Literary and Scientific Translators	1.http://www.gerichtsdolmetscher.at/ 2.http://www.universitas.org/ 3. http://www.literaturhaus.at/	1. office@gerichtsdolmetscher.at 2. info@universitas.org 3. info@literaturhaus.at/ ueg@literaturhaus.at
Azerbaijan	Azerbaijan Youth Translators Association	http://en.agta.az/	info@agta.az

[1] https://www.lexicool.com/translator_associations.asp

https://thetranslationcompany.com/translation-directory/translation-associations.htm

http://www.fit-ift.org/members/eastern-europe/

http://www.eulita.eu/members-admitted-executive-committee-eulita

Belarus	Professional Translators and Interpreters' Guild LLC	https://beltranslations.com/	office@beltranslations.com cd@transguild.by marketing@transguild.by
Belgium	1. ATLB - Association des Traducteurs Littéraires de Belgique 2. BQTA - Belgian Quality Translation Association 3. Belgian Chamber of Translators and Interpreters	1. http://atlb.wordpress.com/ 2. http://www.bqta.be/ 3. http://www.cbti-bkvt.org/	1. associationtlb@gmail.com / emmanuele.sandron@gmail.com/ anne.cohenbeucher@gmail.com 2. info@bqta.be 3. secretariat@translators.be
Bosnia and Herzegovina	UPBH - Association of Translators and Interpreters of Bosnia and Herzegovina	http://www.upbh.ba/	info@upbh.ba
Bulgaria	BTU - Bulgarian Translators' Union	http://www.bgtranslators.org/index.php	office@bgtranslators.org
Croatia	1. Croatian Literaly Translators' Association 2. HDZTP - Croatian Association of Scientific and Technical Translators	1. http://www.dhkp.hr/ 2. http://www.hdztp.hr/	1. ured@dhkp.hr 2. drustvoprevoditelja@gmail.com

Cyprus	PanUTI - Pancyprian Union of Graduate Translators and Interpreters	http://www.pancyuti.com/	pancyuti@gmail.com
Czech Republic	1. JTP - Union of Interpreters and Translators 2. The Translators's Guild	1. http://www.jtpunion.org/ 2. http://www.obecprekladatelu.cz/	1. JTP@JTPunion.org 2. info@obecprekladatelu.cz
Denmark	1. Association of Danish Authorized Translators 2. DT - Danish Association of State-Authorised Translators and Interpreters 3. Danish Authors' Society	1. http://www.translatorforeningen.dk/ 2. http://www.dtfb.dk/ 3. http://www.danskforfatterforening.dk/english.aspx	1. mail@translatorforeningen.dk 2. dt@dtfb.dk 3. df@danskforfatterforening.dk
Estonia	ETTL - Estonian Association of Interpreters and Translators	http://www.ettl.ee/	info@ettl.ee
Finland	SKTL - Finnish Association of Translators and Interpreters	http://www.sktl.fi/	jasenasiat@sktl.fi

France	1. AAE-ESIT - Association des Anciens Élèves de l'École Supérieure d'Interprètes et de Traducteurs 2. AFILS - Aassociation française des interprètes et traducteurs en langue des signes 3. APROTRAD - Association professionnelle des métiers de la traduction 4. ATAA - Association des Traducteurs / Adaptateurs de l'Audiovisuel 5. ATIA - Association of Professional Translators and Interpreters in Aquitaine 6. ATLAS - Assises de la Traduction Littéraire en Arles 7. ATLF - The French Literary Translators' Association 8. CETIECAP - Compagnie des Experts	1. http://www.aaeesit.com/ 2. http://www.afils.fr/ 3. http://www.aprotrad.org/ 4. http://www.ataa.fr/ 5. http://atia.trad.free.fr/en/index.html 6. http://www.atlas-citl.org/ 7. http://www.atlf.org/ 8. http://www.cetiecap.com/ 9. http://www.traducteursdelest.asso.fr/ 10. http://www.creta-france.com/ 11. http://www.septet-traductologie.com/ 12. http://www.sft.fr/ 13. http://www.societe-francaise-traductologie.com/ 14. http://www.unetica.fr/	1. mdttraducteurs@aaeesit.com 2. Contact through website 3. Contact through website 4. info@ataa.fr 5. guskitrad@aol.com/ annie.trio@wanadoo.fr 6. Contact through website 7. Contact through website 8. contact@cetiecap.com 9. youssef.ayache@laposte.net/ fpecot@club-internet.fr/ tanja.merle@free.fr/ nataliya1@hotmail.fr 10. creta@creta-france.com 11. septet.secretariat@gmail.com 12. secretariat@sft.fr 13. Contact through website 14. info@unetica.fr

	Traducteurs et Interprètes en Exercice près la Cour d'Appel de Paris 9. Chambre des Experts-Traducteurs et Traducteurs Jurés de l'Est 10. CRETA - Chambre Régionale des Experts Traducteurs Assermentés d'Alsace 11. SEPTET- Société d'Etudes des Pratiques et Théories en Traduction 12. SFT - The French Association of Translators 13. SoFT - Société Française de Traductologie 14. UNETICA - Union Nationale des Experts Traducteurs - Interprètes près les Cours d'Appel		
Georgia	Translators' and Interpreters' Association of Georgia		manandumbadze@gmail.com
Germany	1. ADÜ Nord - Assoziierte Dolmetscher	1. http://www.adue-nord.de/	1. info@adue-nord.de

	und Übersetzer in Norddeutschland e.V. 2. ATICOM - Fachverband der Berufsübersetzer und Berufsdolmetscher e.V 3. BDÜ - Federal Association of Interpreters and Translators 4. DGÜD - Deutschen Gesellschaft für Übersetzungs - und Dolmetschwissenschaft 5. QSD - Qualitätssprachendienste Deutschlands 6. VDÜ - Verband deutschsprachiger Übersetzer literarischer und wissenschaftlicher Werke e.V. 7. VKD - Verband der Konferenzdolmetscher im BDÜ e.V. 8. VÜD - Verband der Übersetzer und Dolmetscher e.V.	2. http://www.aticom.de/ 3. http://www.bdue.de/bdue/?L=1 4. http://www.dgud.org/ 5. http://www.qsd.de/en/ 6. http://www.literaturuebersetzer.de/ 7. http://vkd.bdue.de/ 8. http://www.vued.de/	2. post@denisa-stroehmer.de 3. info@bdue.de 4. h.gerzymisch@mx.uni-saarland.de 5. info@qsd.de 6. mitgliederverwaltung@literaturuebersetzer.de 7. gs@vkd.bdue.de 8. Contact through website

Greece	PEM - Panhellenic Association of Translators	http://www.pem.gr/	info@pem.gr
Hungary	1. MEGY - Magyar Mufordítók Egyesülete 2. AHTI - Association of Hungarian Translators and Interpreters	1. http://muforditok.hu/ 2. http://www.mfte.hu/	1. info@muforditok.hu 2. elnok@mfte.hu/ info@mfte.hu
Iceland	FLDS, Icelandic Association of Certified Court Interpreters and Translators	www.flds.is	flds@flds.is
Ireland	ITIA - The Irish Translators' and Interpreters' Association	http://www.translatorsassociation.ie/	info@translatorsassociation.ie
Italy	1. AIDAC - Italian Association of Audiovisual Script Translators and Adaptors 2. AITI - Italian Association of Translators and Interpreters 3. ASSITIG - Associazione Italiana Traduttori e Interpreti Giudiziari	1. http://www.aidac.it/index.php/en/ 2. http://www.aiti.org/ 3. http://www.interpretigiudiziari.org/ 4. http://campania.aiti.org/ 5. http://emilia-romagna.aiti.org/ 6. http://friulivg.aiti.org/	1. segreteria@aidac.it/ aidac@aidac.it 2. ammissioni@aiti.org 3. Contact through website 4. aiti-campania@aiti.org 5. segreteria@emilia-romagna.aiti.org 6. eleonorasacchi@alice.it 7. segreteria@lazio.aiti.org 8. liguria.aiti@aiti.org

	4. Associazione Italiana Traduttori e Interpreti sezione Campania 5. Associazione Italiana Traduttori e Interpreti sezione Emilia-Romagna 6. Associazione Italiana Traduttori e Interpreti sezione Friuli-Venezia Giulia 7. Associazione Italiana Traduttori e Interpreti sezione Lazio 8. Associazione Italiana Traduttori e Interpreti sezione Liguria 9. Associazione Italiana Traduttori e Interpreti sezione Lombardia 10. Associazione Italiana Traduttori e Interpreti sezione Marche 11. Associazione Italiana Traduttori e Interpreti sezione Piemonte-Valle d'Aosta	7. http://lazio.aiti.org/ 8. http://liguria.aiti.org/ 9. http://lombardia.aiti.org/ 10. http://marche.aiti.org/ 11. http://pvda.aiti.org/ 12. http://sicilia.aiti.org/ 13. http://toscana.aiti.org/ 14. http://vetaa.aiti.org/ 15. http://www.animu.it/ 16. http://www.anios.it/ 17. http://www.aniti.net/hp/?lang=en 18. http://www.antimi.org/ 19. http://www.assointerpreti.it/en/cp.php?l=en&p=home 20. http://www.cilis.it/presentazione.htm 21. http://www.traduttoristrade.it/ 22. http://www.uebersetzerverband.org/home/index.html	9. segreteria@lombardia.aiti.org 10. segreteria@marche.aiti.org 11. segreteria@pvda.aiti.org 12. segreteria@sicilia.aiti.org 13. segreteria@toscana.aiti.org 14. segreteria@vetaa.aiti.org 15. presidenza@animu.it 16. info@anios.it 17. info@aniti.it 18. antimi@antimi.org 19. info@assointerpreti.it 20. rosariamarano@libero.it 21. tesseramento@traduttoristrade.it 22. info@uebersetzerverband.org

	12. Associazione Italiana Traduttori e Interpreti sezione Sicilia 13. Associazione Italiana Traduttori e Interpreti sezione Toscana 14. Associazione Italiana Traduttori e Interpreti sezione Veneto Trentino Alto Adige 15. ANIMU - Associazione Nazionale degli Interpreti di Lingua dei Segni Italiana 16. ANIOS - Associazione Interpreti di Lingua dei Segni Italiana 17. ANITI - Associazione Nazionale Italiana Traduttori e Interpreti 18. ANTIMI - Associazione Nazionale dei Traduttori e degli Interpreti del Ministero dell'Interno 19. ASSOINTERPRETI - Italian Association of Conference Interpreters		

	20. C.I.L.I.S - Cooperativa Interpreti di Lingua dei Segni Italiana 21. STRADE - Sindacato dei traduttori editoriali 22. LDÜ-UPT - Landesverband der Übersetzer - Unione provinciale traduttori		
Kazakhstan	-	-	
Kosovo	-	-	
Latvia	The Latvian Association of Interpreters and Translators	http://www.lttb.lv/?lang=en	info@opmlink.com
Liechtenstein	-	-	
Lithuania	Lithuanian Association of Literaly Translators	http://www.llvs.lt/	info@llvs.lt
Luxembourg	ALTI - Luxembourg Association of Translators and Interpreters	http://www.traducteurs-interpretes.lu/en/	contact@traducteurs-interpretes.lu
Macedonia	MATA - Macedonian Translators Association	http://mata.mk/en/	contact@mata.mk

Malta	Department of Translation and Interpreting Studies, Faculty of Arts, University of Malta	www.um.edu.mt	info@um.edu.mt
Moldova	ATP - Association of Professional Translators of Moldova	http://translators.md/en/	atpmoldova@translators.md
Monaco	*belongs with French associations		
Montenegro	-	-	
Netherlands	1. NBTG - Dutch Association of Sign Language Interpreters 2. NGTV - Nederlands Genootschap van Tolken en Vertalers 3. SIGV - Court Interpreters and Legal Translators 4. Stichting Vertalersforum 5. VSenV - Dutch Association of Writers and Translators	1. http://www.nbtg.nl/ 2. http://www.ngtv.nl/ 3. http://www.sigv-vereniging.nl/introduction 4. http://www.vertalersforum.nl/ 5. http://www.vsenv.nl/content/82/0/English.html 6. http://www.vzv.info/	1. info@nbtg.nl 2. ngtv@ngtv.nl 3. secretariaat@sigv-vereniging.nl 4. info@vertalersforum.nl 5. bureau@vsenv.nl 6. info@vzv.info

	6. VZV - Dutch Association of Freelance Professional Translators		
Norway	1. NAVIO - The Norwegian Audiovisual Translators Association 2. NFF - The Norwegian Non-fiction Writers and Translators Association 3. NO - Norwegian Association of Literary Translators 4. The Association of Government Authorized Translators in Norway	1. http://www.navio.no/ 2. http://www.nffo.no/ 3. http://oversetterforeningen.no/english/ 4. https://www.translatorportalen.com/en/hjem/	1. post@navio.no 2. post@nffo.no 3. post@translators.no 4. post@translatorportalen.com
Poland	1. STP - Polish Society of Literary Translators 2. TEPIS - Polish Society of Sworn and Specialised Translators	1. http://www.stp.org.pl/ 2. http://www.tepis.org.pl/	1. stp@stp.org.pl/ stp@stowarzyszenietlumaczypolskich.org.pl 2. tepis@tepis.org.pl
Portugal	1. APT - Portuguese Association of Translators 2. APTRAD - Associaçãode Portuguesa de Tradutores e Intérpretes	1. http://www.apt.pt/ 2. http://www.aptrad.pt/	1. info@apt.pt 2. geral@aptrad.pt

Romania	1. ATR - Romanian Translators Association 2. UNTAR - Uniunea Nationala a Traducatorilor Autorizati din Romania	1. http://www.atr.org.ro/ 2. http://www.traduceri-notariale.ro/	1. Contact through website 2. office@traduceri-notariale.ro
Russia	1. The National League of Translators (Russia) 2. Institute for Literary Translation 3. Union of Translators of Russia 4. Union of Translators of Russia - Moldavia Branch 5. Union of Translators of Russia - Saint Petersburg Branch 6. Union of Translators of Russia - Sverdlovsk Region Branch	1. http://en.russian-translators.ru/ 2. http://institutperevoda.ru/?lang=eng 3. http://www.translators-union.ru/ 4. http://lang.mrsu.ru/ 5. http://www.utr.spb.ru/index.htm 6. http://utr-ural.ru/	1. igaoffice@russian-translators.ru 2. info@institutperevoda.ru 3. gurutrus@yandex.ru 4. aleksandr_z@list.ru 5. utr.spb.ru@gmail.com 6. translation2russian@gmail.com
San Marino	- (ATA)	-	
Serbia	UKPS/ALTS - Association of Literary Translators of Serbia	http://www.ukpsalts.org/index.php?lang=cy	ukps011@gmail.com

Slovakia	1. JTP - Union of Interpreters and Translators 2. LIC - Literarne Informacne centrum (Slovakia) 3. SAPT -The Slovak Association of Translators and Interpreters 4. SSPOL - Slovak Society of Translators of Scientific and Technical Literature	1. http://www.jtpunion.org/ 2. http://www.litcentrum.sk/ 3. http://www.sapt.sk/en 4. http://www.sspol.sk/index.php	1. JTP@JTPunion.org 2. lic@litcentrum.sk 3. sekretariat@sapt.sk 4. info@sspol.sk
Slovenia	1. Association of Sworn Court Interpreters and Legal Translators of Slovenia 2. DSKP - Slovenian Association of Literary Translators 3. DZTPS - Association of Scientific and Technical Translators of Slovenia	1. http://www.sodni-tolmaci.si/ 2. http://www.dskp-drustvo.si/ 3. http://www.dztps.si/	1. info@sodni-tolmaci.si 2. dskp@dskp-drustvo.si/ dsp@drustvo-dsp.si 3. info@dztps.si
Spain	1. ACEtt - Spanish Literary Translators Association	1. http://ace-traductores.org/	1. lamorada@acett.org 2. aelc@escriptors.cat

	2. AELC - The Association of Catalan Language Writers 3. AGPTI - Asociación Galega de Profesionais da Traducción e da Interpretación 4. AICE - Spanish Association of Conference Interpreters 5. AIETI - Asociación Ibérica de Estudios de Traducción e Interpretación 6. APETI - Asociación Profesional Española de Traductores e Intérpretes 7. ASATI - Asociación Aragonesa de Traductores e Intérpretes 8. ASETRAD - Asociación Española de Traductores, Correctores e Intérpretes 9. APTIC - Associació Professional de Traductors i Intèrprets de Catalunya	2. http://www.escriptors.cat/English 3. http://www.agpti.org/ 4. http://www.aice-interpretes.com/ 5. http://www.aieti.eu/ 6. http://www.apeti.org.es/ 7. http://www.asati.es/index.php 8. https://asetrad.org/es/ 9. http://www.aptic.cat/en/ 10. http://www.atijc.com/ 11. http://webs.uvigo.es/webatg/viceversa.html 12. http://www.atrae.org/ 13. http://www.eizie.eus/ 14. http://www.xarxativ.es/	3. info@agpti.org 4. aice@aice-interpretes.com 5. secretaria@aieti.eu 6. soporte@apeti.org.es 7. Contact through website 8. asetrad@asetrad.org 9. secretaria@aptic.cat 10. info@atijc.com 11. info@tradutoresgalegos.com 12. rrpp@atrae.org 13. bulegoa@eizie.eus 14. Contact through website

	10. ATIJC - Association of Sworn Translators and Interpreters of Catalonia 11. ATG - Asociación de Traductores Galegos 12. ATRAE - Asociación de Traducción y Adaptación Audiovisual de España 13. EIZIE - Association of Translators, Correctors and Interpreters of Basque Language 14. XARSATIV - Red de traductores e intérpretes de la Comunidad Valenciana		
Sweden	1. FAT - Federation of Authorised Translators 2. SELTA - The Swedish-English Literary Translators' Association 3. SFÖ - The Swedish Association of Professional Translators 4. SFF - The Swedish Writers' Union	1. http://www.aukttranslator.se/en 2. http://www.selta.org.uk/ 3. http://www.sfoe.se/ 4. http://www.forfattarforbundet.se/	1. info@aukttranslator.se/ sekreterare@aukttranslator.se 2. seltasecretary@gmail.com 3. kansli@sfoe.se 4. info@forfattarforbundet.se

Switzerland	1. ADS - Autrices et Auteurs de Suisse 2. AETI - Association des Etudiants en Traduction et Interprétation, Genève 3. AIT - Association d'Interprètes et de Traducteurs, Genève 4. ASTJ - Association Suisse des Traducteurs-Jurés 5. ASTTI - Swiss Association of Translators, Terminologists and Interpreters 6. CTL - Centre de Traduction Littéraire de l'Université de Lausanne 7. INTERPRET - Association Suisse pour l'interprétation Communautaire et la Médiation Culturelle 8. VZGDÜ - Verband der Zürcher Gerichtsdolmetscher und -Übersetzer	1. http://www.a-d-s.ch/ 2. https://aetiunige.wordpress.com/ 3. http://www.aitge.ch/ 4. http://www.astj.ch/ 5. http://new.astti.ch/ 6. http://www.unil.ch/ctl/home.html 7. http://www.inter-pret.ch/ 8. http://vzgdu.ch/index.php/de/	1. sekretariat@a-d-s.ch/ npfister@a-d-s.ch/ pbuettiker@a-d-s.ch/ possola@a-d-s.ch 2. aeti@unige.ch 3. info@aitge.ch 4. astj@astj.ch 5. astti@astti.ch 6. translatio@unil.ch 7. info@inter-pret.ch 8. info@vzgdu.ch

Turkey	1. Association of Translation 2. TKTD - Conference Interpreters Association 3. TÜCED - Turkish Translator's Association 4. Türkiye I.lim ve Edebiyat Eseri Sahipleri Meslek Birlig	1. http://www.ceviridernegi.org/ 2. http://www.tktd.org/ 3. http://tuced.org.tr/ 4. http://www.ilesam.org.tr/	1. info@ceviridernegi.org 2. tktd@tktd.org 3. info@tuced.org.tr 4. ilesam@ilesam.org.tr
Ukraine	UTA - Ukrainian Translators Association	http://www.uta.org.ua/en	info@uta.org.ua
United Kingdom (UK)	1. APCI - Association of Police & Court Interpreters 2. CIOL - Chartered Institute of Linguists 3. CROESO - The Association of Welsh Translators and Interpreters 4. ITI - Institute of Translation & Interpreting 5. NRPSI Ltd - National Register of Public Service Interpreters	1. http://www.apciinterpreters.org.uk/ 2. http://www.ciol.org.uk/ 3. http://www.welshtranslators.org.uk/ 4. http://www.iti.org.uk/ 5. http://www.nrpsi.co.uk/ 6. http://www.unitetheunion.org/nupit 7. http://www.subtitlers.org.uk/	1. chairman@apciinterpreters.org.uk/ vicechairman@apciinterpreters.org.uk 2. Contact through website 3. Contat through website 4. info@iti.org.uk 5. nupit@unitetheunion.org 6. executive.council@unitetheunion.org 7. j.diaz-cintas@ucl.ac.uk

	6. NUPIT - National Union of Professional Interpreters and Translators 7. SUBTLE - The Subtitlers' Association 8. The Society of Authors - Translation Association	8. http://www.societyofauthors.org/Groups/Translators	8. info@societyofauthors.org
Vatican City (Holy See)	-	-	

Other pages contacted:

Translator Power	https://www.facebook.com/groups/19108655022/
Translators & Interpreters	https://www.facebook.com/groups/676465502466988/
Linguist Continuing Education	https://www.facebook.com/groups/405261446201590/
IGDA - Localization SIG	https://www.facebook.com/groups/igdalocsig/
Tradutores Com Vida	https://www.facebook.com/groups/453713148030201/
Map of the Urban Linguistic Landscape (MULL)	https://www.facebook.com/groups/MUrbanLL/
Terminologia e Gestão da Informação de Especialidade	https://www.facebook.com/groups/130850356936096/

FLUL - Tradução	https://www.facebook.com/groups/262701200439355/?ref=br_rs
Ente Nazionale Sordi - Onlus	https://www.facebook.com/ENSOnlus/
ProZ.com	https://www.facebook.com/prozdotcom
International Association of Professional Translators and Interpreters	https://www.facebook.com/IAPTI/?ref=hovercard
Translation Journal	https://www.facebook.com/translationjourn/?ref=timeline_chaining
Institute of Translation and Interpreting	https://www.facebook.com/ITIofficial/
Freelance Translators/ Proofreaders	https://www.facebook.com/FreelanceTranslators.Proofreaders/
Translators without Borders	https://www.facebook.com/translatorswithoutborders/
Translators Family	https://www.facebook.com/TranslatorsFamily/
TranslationWebshop	http://www.translationwebshop.com

APPENDIX E

QUESTIONNAIRE INTRODUCTORY MESSAGE TO "DISABLED TRANSLATORS' USE OF TECHNOLOGY: PRESENT REALITY AND FUTURE POSSIBILITIES"

QUESTIONNAIRE INTRODUCTORY MESSAGE

1. **E-mail to translation associations:**

Greetings /To whom it may concern/ Dear colleagues:

My name is Priscila Patatas and I'm a Master's student in Translation at the Nova University of Lisbon, in Portugal. Currently, I am working on my final dissertation on "Disabled translators' use of technology: present reality and future possibilities". Although it is a very important area in our profession, there is much to be explored. As such, I would like to ask for your assistance in reaching any translator with disabilities in your database and invite them to complete this concise questionnaire with the duration of 20-30 minutes until 20/01/2018. The questionnaire would provide realistic and updated data and will prove invaluable to the study in case.

The questionnaire is accessible through this link: https://goo.gl/forms/Orf6gj5mNMH5cW0n

Thank you in advance for your attention and dedication.

Kind regards,

This questionnaire is open now and will close at midnight on the 20th January 2018. It will take 20-30 minutes to complete and all responses will be treated confidentially, unless you authorise otherwise. By completing this questionnaire, you authorise the use, collection, study and publication of any information you have entered, anonymously or not.

2. **Introductory message for other contact pages**:

Dear colleagues:

My name is Priscila Patatas and I'm a Master's student in Translation at the Nova University of Lisbon, in Portugal. Currently, I am working on my final dissertation on "Disabled translators' use of technology: present reality and future possibilities". Although it is a very important area in our profession, there is much to be explored. As such, if it applies to you, I would like to ask for your assistance completing this questionnaire with the duration of 20-30 minutes until 20/01/2018. The questionnaire would provide realistic and updated data and will prove invaluable to the study in case.

The questionnaire is accessible through this link: https://goo.gl/forms/Orf6gj5mNMH5cW0n1

Thank you in advance for your attention and dedication!

Priscila Patatas

Translator and Master's student at Nova University of Lisbon

This questionnaire is open now and will close at midnight on the 20th January 2018. It will take 20-30 minutes to complete and all responses will be treated confidentially, unless you authorise otherwise. By completing this questionnaire, you authorise the use, collection, study and publication of any information you have entered, anonymously or not.

3. Questionnaire introductory message:

My name is Priscila Patatas and I'm a Master's student in Translation at the Nova University of Lisbon, in Portugal. I am currently working on my final dissertation on "Disabled translators' use of technology: present reality and future possibilities". Although it is a very important area in our profession, there is much to be explored. As such, I would like to ask for your assistance completing this questionnaire. It would provide realistic and updated data and will prove invaluable to the study in question.

Thank you in advance for your attention and dedication.

This questionnaire is open now and will close at midnight on the 20th January 2018. It will take 20-30 minutes to complete and all responses will be treated confidentially, unless you authorise otherwise. By completing this questionnaire, you authorise the use, collection, study and publication of any information you have entered, anonymously or not.

APPENDIX F

ORIGINAL RESULTS FROM THE QUESTIONNAIRE "DISABLED TRANSLATORS' USE OF TECHNOLOGY: PRESENT REALITY AND FUTURE POSSIBILITIES"

Timestamp	1. Nationality:	2. Country you live in:	3. Age:	4. Gender:	5. Professional situation
12/20/2017 16:09:15	Test	Test	< 25	Male	Freelancer
12/28/2017 14:57:17	German	Germany	36-45	Female	Freelancer
12/28/2017 16:16:59	Czech	Czech Republic	46-55	Female	Freelancer
12/29/2017 9:02:57	Austria	Austria	26-35	Female	Freelancer
12/29/2017 9:07:16	Austrian	Austria	26-35	Female	Freelancer
12/29/2017 12:30:03	Austrian	Austria	26-35	Female	Freelancer
12/29/2017 16:42:39	German	Germany	36-45	Female	Freelancer
1/2/2018 14:34:51	German	Germany	56-65	Male	Freelancer
1/3/2018 17:38:03	Estonian	Estonia	46-55	Female	Freelancer
1/4/2018 9:30:04	German	Germany	36-45	Female	Freelancer
1/4/2018 9:51:40	German	Germany	46-55	Female	Freelancer
1/4/2018 10:56:45	German	Germany	46-55	Female	Freelancer
1/4/2018 19:20:58	Dutch	Netherlands	46-55	Female	Freelancer
1/4/2018 22:08:19	Dutch	the Netherlands	36-45	Female	Freelancer
1/5/2018 0:34:09	Italy	Japan	36-45	Male	Freelancer
1/5/2018 1:41:14	Argentine	Argentina	26-35	Female	Freelancer
1/5/2018 2:25:23	Australian	Australia	36-45	Female	Freelancer
1/5/2018 4:21:46	Portuguese	Portugal	< 25	Male	Freelancer
1/5/2018 8:12:46	British	France	> 65	Male	Freelancer
1/5/2018 11:15:31	Italian	Italy	36-45	Male	Freelancer
1/5/2018 12:57:19	French	France	26-35	Female	Freelancer
1/5/2018 14:42:51	Estonian	Estonia	56-65	Male	Freelancer
1/5/2018 14:43:44	Italian	Italy	26-35	Male	Freelancer
1/5/2018 17:46:18	French	France	36-45	Female	Freelancer
1/6/2018 19:24:15	Française	Bordeaux	< 25	Female	Freelancer
1/8/2018 10:47:14	French	France	46-55	Female	Freelancer
1/9/2018 13:43:00	French	France	< 25	Female	Intern
1/9/2018 13:58:01	Slovak	Slovakia	< 25	Male	Freelancer
1/9/2018 23:26:36	French	Monaco	26-35	Male	Freelancer
1/10/2018 2:07:16	Austria	Austria	36-45	Female	Freelancer
1/10/2018 9:41:10	Slovene	Slovenia	56-65	Male	Freelancer
1/10/2018 14:39:32	french	france	26-35	Female	Freelancer
1/11/2018 6:12:28	Lebanese	Lebanon	46-55	Female	Salaried translator with (
1/14/2018 17:39:36	Czech	Czech republic	46-55	Female	Freelancer
1/15/2018 11:17:35	German	Germany	36-45	Female	Freelancer

6. Professional situation	7. Where is your main p	8. Years of activity in Tr	9. Educational qualificat	10. Specialties (choose a	11. Type of disability (cl
Part-time	At home	< 1 year		Architecture, Art	Mobility and Physical In
Full-time	At home	10-15 years	Master's degree in transl	Business, Law, Renewal	Mobility and Physical In
Full-time	At home	> 20 years	Bachelor's degree in trar	Law, Technical docume	Mobility and Physical In
Occasional	At home	6-10 years	Training course in transl	Biology, Business, Chen	Vision Disability: Comp
Full-time	At home	6-10 years	Master's degree in transl	Marketing, Medicine, T	Mobility and Physical In
Full-time	At home	2-5 years	Bachelor's degree in trar	Business, Environment,	Vision Disability: Comp
Part-time	At home	< 1 year	Master's degree in transl	Gastronomy, Law, Liter	Psychological Disorders
Full-time	At home	10-15 years	Training course in transl	Business, Economics an	Mobility and Physical In
Occasional	At home	> 20 years	No degree or training in	Literature	Heart problems
Full-time	At home	10-15 years	Master's degree in transl	Business, Gastronomy, I	balbuties
Full-time	At home	6-10 years	Bachelor's degree in trar	Business, Computer Sci	Vision Disability: Comp
Full-time	At home	> 20 years	Post-graduate course in t	Literature, Medicine	Vision Disability: Partia
Full-time	At home	6-10 years	No degree or training in	Computer Science, Fash	Psychological Disorders
Part-time	At home	2-5 years	Training course in transl	Business, Literature, Me	Vision Disability: Partia
Full-time	At home	15-20 years	Post-graduate course in t	Multimedia	None?
Full-time	At home	2-5 years	Bachelor's degree in trar	Law, Literature, Medici	Mobility and Physical In
Part-time	At home	6-10 years	Bachelor's degree in trar	Videogaming	Psychological Disorders
Occasional	At home	< 1 year	Training course in transl	Gastronomy, Marketing,	Spinal Cord Disability
Part-time	At home	> 20 years	No degree or training in	Business, Economics an	Vision Disability: Partia
Full-time	At home	10-15 years	Master's degree in transl	Environment, Marketing	Mobility and Physical In
Full-time	At home	2-5 years	Master's degree in transl	Computer Science, Med	Mobility and Physical In
Occasional	At home	> 20 years	No degree or training in	Medicine, Pharmacy	Psychological Disorders
Occasional	At home	6-10 years	Master's degree in transl	Computer Science, Ecor	Cognitive or Learning D
Part-time	At home	6-10 years	Master's degree in transl	Business, Economics an	Cognitive or Learning D
Closed activity/ Retired	At home	< 1 year	Training course in transl	Tourism	Any dissability
Full-time	At home	> 20 years	Master's degree in transl	Technical documentatio	Kidney transplant
Full-time	In an office of a compan	< 1 year	Training course in transl	Law, Pharmacy	Mobility and Physical In
Occasional	At home	2-5 years	Master's degree in transl	Computer Science, Liter	Vision Disability: Comp
Part-time	At home	2-5 years	Training course in transl	Environment, Law, Spor	Mobility and Physical In
Occasional	At home	2-5 years	No degree or training in	Business	None
Full-time	At home	> 20 years	No degree or training in	Business, Gastronomy, I	Mobility and Physical In
Full-time	At home	6-10 years	No degree or training in	Biology, Business, Chen	Mobility and Physical In
Full-time	In an office of a compan	> 20 years	Master's degree in transl	All the above	Vision Disability: Partia
Occasional	At home	> 20 years	Master's degree in transl	Art, Literature	Vision Disability: Comp
Full-time	At home	6-10 years	No degree or training in	Multimedia, Videogami	Vision Disability: Partia

12. Do you require speci	13. If you replied “yes” t	14. In case of "yes" in qu	15. Have you done exerc	16. Do you require speci	17. If you replied “yes” t
Yes	Desk, Chair, test	test, test, test	Yes	Yes	Automatic Page Turners
No (please, go to question	15)		Yes	No (please, go to question	19)
Yes	Chair, Hand equipment	ergonomic keyboard, erg	Yes	No (please, go to question	19)
Yes	Braille display, Jaws.	Braille display, Jaws.	No, and I don’t intend to	Yes	Braille reading devices,
No (please, go to question	15)		Yes	Yes	Microphone, voice recog
Yes	Desk, Chair	Of course, I have a desk	No, and I don’t intend to	Yes	Braille reading devices,
No (please, go to question	15)		Yes	No (please, go to question	19)
Yes	Desk, Electronic wheel-c	Trackball instead of a m	Yes	Yes	Mouse: Trackballs
Yes	Arm rest	wrist protection	No, and I don’t intend to	No (please, go to question	19)
No (please, go to question	15)		No, and I don’t intend to	No (please, go to question	19)
Yes	Braille display and scree	A braille display needs t	No, and I don’t intend to	Yes	Braille reading devices
Yes	Desk, Chair, Hand equip	Desk with a lowered, pu	Yes	Yes	Keyboard, Mouse: Track
Yes	Chair	The chair should be high	No, but I intend to do so	Yes	Keyboard, Mouse: Track
No (please, go to question	15)		Yes	No (please, go to questic	Headphones, Screen
No (please, go to question	15)		No, and I don’t intend to	No (please, go to question	19)
No (please, go to question	15)		Yes	No (please, go to question	19)
No (please, go to question	15)		Yes	No (please, go to question	19)
No (please, go to question	15)		No, and I don’t intend to	No (please, go to question	19)
Yes	Large VDUs	Large displays	No, and I don’t intend to	Yes	Screen
No (please, go to question	15)		Yes	No (please, go to question	19)
Yes	Desk	Desk at a special height	Yes	Yes	Keyboard, Microphone,
No (please, go to question	15)		No, and I don’t intend to	No (please, go to question	19)
No (please, go to question	15)		Yes	No (please, go to question	19)
No (please, go to question	15)		Yes	No (please, go to question	19)
No (please, go to question	15)		No, and I don’t intend to	No (please, go to question	19)
No (please, go to question	15)		No, and I don’t intend to	No (please, go to question	19)
No (please, go to question	15)		No, but I intend to do so	No (please, go to question	19)
No (please, go to question	15)		No, and I don’t intend to	No (please, go to question	19)
No (please, go to question	15)		No, and I don’t intend to	Yes	Speech recognition sofw
No (please, go to question	15)		Yes	No (please, go to question	19)
No (please, go to question	15)		Yes	No (please, go to question	19)
Yes	Hand equipment	specific keyboard	Yes	Yes	Keyboard
No (please, go to question	15)		No, and I don’t intend to	No (please, go to questic	Screen, Just a big screen
No (please, go to question	15)		Yes	Yes	Braille reading devices,
No (please, go to question	15)		No, but I intend to do so	No (please, go to question	19)

18. Please list the equip	19. Which operating sys	20. Which Computer-ass	21. Do you require speci	22. If you replied “yes” t	23. Please list the softwa
test	Android	I don’t use CAT-Tools	Yes	Computer access software	
	Microsoft Windows	Across	No (please, go to question 26)		
	Microsoft Windows	Wordfast Pro	No (please, go to question 26)		
JAws, Braille Display, h	Microsoft Windows	I don’t use CAT-Tools,	Yes	Computer access softwa	JAWS, Screenrader.
Microphon, voice recogi	macOS	Wordfast Anywhere	Yes	Voice recognition softw	Voice recognition softw
Active Braille by Handy	Microsoft Windows	I don’t use CAT-Tools	Yes	screen reading software	Jaws
	Microsoft Windows	Across	No (please, go to question 26)		
Trackball instead of a m	Microsoft Windows	SDL Trados / SDL Stud	No (please, go to question 26)		
	Microsoft Windows	I don’t use CAT-Tools	No (please, go to question 26)		
	Microsoft Windows	MemoQ	No (please, go to question 26)		
As I already mentioned,	Microsoft Windows	I don’t use CAT-Tools	Yes	Computer access softwa	Screen reader, as mentio
ergonomic keyboard and	Microsoft Windows	SDL Trados / SDL Stud	No (please, go to question 26)		
Trackball mouse, Drago	Microsoft Windows	Across, MemoQ, Passol	Yes	Voice recognition softw	Dragon Natural Speakin
	macOS	I don’t use CAT-Tools	No (please, go to question 26)		
	Microsoft Windows	MemoQ	No (please, go to question 26)		
	Microsoft Windows	I don’t use CAT-Tools	No (please, go to question 26)		
	Microsoft Windows	I don’t use CAT-Tools	No (please, go to question 26)		
	Microsoft Windows	I don’t use CAT-Tools	No (please, go to question 26)		
Two screens	Microsoft Windows	SDL Trados / SDL Stud	No (please, go to question 26)		Old Trados (2007) Work
	Microsoft Windows	Across, MemoQ, SDL T	No (please, go to question 26)		
Mini-keyboard, althoug	Microsoft Windows	Passolo, SDL Trados / S	Yes	Voice recognition softw	Dragon Naturally Speak
	Microsoft Windows	I don’t use CAT-Tools	No (please, go to question 26)		
	Microsoft Windows	SDL Trados / SDL Stud	No (please, go to question 26)		
	Microsoft Windows	SDL Trados / SDL Stud	No (please, go to question 26)		
	macOS	I don’t use CAT-Tools	No (please, go to question 26)		
	Microsoft Windows	Idiom, Idiom Worldserv	No (please, go to question 26)		
	Microsoft Windows	SDL Trados / SDL Stud	No (please, go to question 26)		
	Microsoft Windows	I don’t use CAT-Tools	Yes	Screen reader	I am using the screen rea
Dragon Voice Naturally	Microsoft Windows	SDL Trados / SDL Stud	No (please, go to question 26)		
	macOS	I don’t use CAT-Tools	No (please, go to question 26)		
	Microsoft Windows	Across, Passolo, SDL T	No (please, go to question 26)		
keyboard	Microsoft Windows	I don’t use CAT-Tools	No (please, go to question 26)		
Screen	Microsoft Windows	SDL Trados / SDL Stud	Yes	Screen enlargement soft	A built in featurein eLU
Speech generating devic	Microsoft Windows	I don’t use CAT-Tools	Yes		
	Microsoft Windows	MemoQ	No (please, go to question 26)		

24. Do you use the afore	25. If you replied “yes” t	26. Do you require speci	27. If you replied “yes” t	28. Do you use the afore	29. If you replied “yes” t
Yes, and all work with a test		Yes	Adaptation of keyboard	Yes, and all work with all CAT-Tools	
		No (please, go to question 30)			
		No (please, go to question 30)			
Yes, but they don’t work	With JAWS 17 and Win	Yes	Adaptation of keyboard	Yes, but they don’t work	With trados I used the ca
Yes, but they don’t work	not all voice orders work	No (please, go to question 30)			
Yes, but they don’t work	Regarding CAT tools, I	No (please, go to question 30)			
		No (please, go to question 30)			
No, I don’t use special software within CAT-Too		No (please, go to question 30)		No, I don’t use special layout options	
		No (please, go to question 30)			
		No (please, go to question 30)			
No, I don’t use CAT-Tools		Yes	Adaptation of keyboard	No, I don’t use CAT-Tools	
No, I don’t use special software		Yes	Magnification of text an	Yes, but they don’t work	Icons in SDL Trados are
Yes, and all work with all CAT-Tools		No (please, go to question 30)			
		Yes	Magnification of text an	No, I don’t use CAT-Tools	
No, I don’t use special software		No (please, go to question 30)			
		No (please, go to question 30)			
		No (please, go to question 30)			
		No (please, go to question 30)			
Yes, but they don’t work	Later versions of Word c	Yes	Magnification of text an	Yes, but they don’t work with all CAT-Tools	
		No (please, go to question 30)			
Yes, but they don’t work	Tstream Editor	Yes	Adaptation of keyboard	Yes, but they don’t work	Tstream Editor
		Yes	Magnification of text an	No, I don’t use CAT-Tools	
		Yes	Magnification of text an	Yes, and all work with all CAT-Tools	
		No (please, go to question 30)			
		No (please, go to question 30)			
		No (please, go to question 30)			
		No (please, go to question 30)			
No, I don’t use CAT-Tools		No (please, go to question 30)			
		No (please, go to question 30)			
		No (please, go to question 30)			
		No (please, go to question 30)			
		No (please, go to question 30)			
		No (please, go to question 30)			
Yes, but they don’t work	It is not very flexible. It	Yes	Magnification of text an	Yes, but they don’t work	It is not easy to use magn
No, I don’t use CAT-Tools		Yes	Narrator option, Sound r	No, I don’t use CAT-Tools	
		No (please, go to question 30)			

30. Do you use Voice R	31. If you replied “yes” t	32. Do you use the afore	33. If you replied “yes” t	Email:
Yes	Braina Pro	Yes, and all work with a	test	test@test.com
No (please, go to the end)				
Yes	Dragon Naturally Speak	Yes, and all work with all	CAT-Tools	hana.jarolimova@email.cz
No (please, go to the end)		No, I don’t use voice recognition software		ursula_raunig@gmx.at
Yes	Dragon Naturally Speak	Yes, but they don’t work	I only tried it with Word	fast anywhere and CafeTran, it works but not alwa
No (please, go to the end)				daniela.dold@utanet.at
No (please, go to the end)				info@zopf-anne.de
No (please, go to the end)				T.Kleinau@t-online.de
No (please, go to the end)				kristina.uluots@mail.ee
No (please, go to the en	Not able to use it	No, I don’t use voice recognition software		cbdeus@yahoo.de
No (please, go to the end)				
Yes	Dragon Naturally Speak	No, I don’t use voice rec	I prefer to work without	CAT-Tools anyway; for literature that's just fine
Yes	Dragon Naturally Speak	Yes, and all work with all	CAT-Tools	ymkje@lochside.nl
Yes	Siri and Apple Dictation	No, I don’t use voice recognition software within	CAT-Tools	
Yes	Dragon Naturally Speak	Yes, and all work with all	CAT-Tools	
No (please, go to the end)				tirantitraducciones@gmail.com
No (please, go to the end)				cassiel@gmail.com
No (please, go to the end)				davidlfer97@hotmail.com
No (please, go to the end)				pg@language-for-clarity.de
No (please, go to the end)				
Yes	Dragon Naturally Speak	Yes, but they don’t work	Tstream Editor	emilie.devrainne@gmail.com
No (please, go to the end)		No, I don’t use CAT-Tools		urmasre@hot.ee
Yes	Dragon Naturally Speak	No, I don’t use voice recognition software within	CAT-Tools	
No (please, go to the end)		No, I don’t use voice recognition software		barbara.pissane@free.fr
No (please, go to the end)				
No (please, go to the end)				
No (please, go to the end)				
No (please, go to the end)				michal.homola55@gmail.com
Yes	Dragon Naturally Speak	Yes, and all work with all	CAT-Tools	ivan.gopcevic@gmail.com
No (please, go to the end)		No, I don’t use voice recognition software within	CAT-Tools	
No (please, go to the end)				janez.mervar2@gmail.com
No (please, go to the end)				c.e.viennot@gmail.com
No (please, go to the end)		No, I don’t use voice rec	Translation is an intellec	noun@un.org
No (please, go to the end)		No, I don’t use voice recognition software		jirina.holenova@centrum.cz
No (please, go to the end)				

ays very good.

APPENDIX G

CORRECTED RESULTS FROM THE QUESTIONNAIRE “DISABLED TRANSLATORS’ USE OF TECHNOLOGY: PRESENT REALITY AND FUTURE POSSIBILITIES”

Timestamp	1. Nationality:	2. Country you live in:	3. Age:	4. Gender:	5. Professional situation:	6. Professional situation:	7. Where is your main p	8. Years of activity in Tı
12/28/2017 14:57:17	German	Germany	36-45	Female	Freelancer	Full-time	At home	10-15 years
12/28/2017 16:16:59	Czech	Czech Republic	46-55	Female	Freelancer	Full-time	At home	> 20 years
12/29/2017 9:02:57	Austrian	Austria	26-35	Female	Freelancer	Occasional	At home	6-10 years
12/29/2017 9:07:16	Austrian	Austria	26-35	Female	Freelancer	Full-time	At home	6-10 years
12/29/2017 12:30:03	Austrian	Austria	26-35	Female	Freelancer	Full-time	At home	2-5 years
12/29/2017 16:42:39	German	Germany	36-45	Female	Freelancer	Part-time	At home	< 1 year
1/2/2018 14:34:51	German	Germany	56-65	Male	Freelancer	Full-time	At home	10-15 years
1/4/2018 9:30:04	German	Germany	36-45	Female	Freelancer	Full-time	At home	10-15 years
1/4/2018 9:51:40	German	Germany	46-55	Female	Freelancer	Full-time	At home	6-10 years
1/4/2018 10:56:45	German	Germany	46-55	Female	Freelancer	Full-time	At home	> 20 years
1/4/2018 19:20:58	Dutch	Netherlands	46-55	Female	Freelancer	Full-time	At home	6-10 years
1/4/2018 22:08:19	Dutch	Netherlands	36-45	Female	Freelancer	Part-time	At home	2-5 years
1/5/2018 4:21:46	Portuguese	Portugal	< 25	Male	Freelancer	Occasional	At home	< 1 year
1/5/2018 8:12:46	British	France	> 65	Male	Freelancer	Part-time	At home	> 20 years
1/5/2018 11:15:31	Italian	Italy	36-45	Male	Freelancer	Full-time	At home	10-15 years
1/5/2018 12:57:19	French	France	26-35	Female	Freelancer	Full-time	At home	2-5 years
1/5/2018 14:42:51	Estonian	Estonia	56-65	Male	Freelancer	Occasional	At home	> 20 years
1/5/2018 14:43:44	Italian	Italy	26-35	Male	Freelancer	Occasional	At home	6-10 years
1/5/2018 17:46:18	French	France	36-45	Female	Freelancer	Part-time	At home	6-10 years
1/9/2018 13:43:00	French	France	< 25	Female	Intern	Full-time	In an office of a compan	< 1 year
1/9/2018 13:58:01	Slovak	Slovakia	< 25	Male	Freelancer	Occasional	At home	2-5 years
1/9/2018 23:26:36	French	Monaco	26-35	Male	Freelancer	Part-time	At home	2-5 years
1/10/2018 9:41:10	Slovene	Slovenia	56-65	Male	Freelancer	Full-time	At home	> 20 years
1/10/2018 14:39:32	French	France	26-35	Female	Freelancer	Full-time	At home	6-10 years
1/14/2018 17:39:36	Czech	Czech Republic	46-55	Female	Freelancer	Occasional	At home	> 20 years
1/15/2018 11:17:35	German	Germany	36-45	Female	Freelancer	Full-time	At home	6-10 years

9. Educational qualificat	10. Specialties (choose a	11. Type of disability (cl	12. Do you require speci	13. If you replied “yes” t	14. In case of "yes" in qu	15. Have you done exerc	16. Do you require speci	17. If you replied “yes” t
Master's degree in transl	Business, Law, Renewal	Mobility and Physical In	No (please, go to question 15)			Yes	No (please, go to question 19)	
Bachelor's degree in tran	Law, Technical docume	Mobility and Physical In	Yes	Chair, Hand equipment	ergonomic keyboard, er	Yes	No (please, go to question 19)	
Training course in transl	Biology, Business, Chen	Vision Disability: Comp	No (please, go to question 15)			No, and I don’t intend to	Yes	Braille reading devices,
Master's degree in transl	Marketing, Medicine, T	Mobility and Physical In	No (please, go to question 15)			Yes	Yes	Microphone
Bachelor's degree in tran	Business, Environment,	Vision Disability: Comp	No (please, go to question 15)			No, and I don’t intend to	Yes	Braille reading devices
Master's degree in transl	Gastronomy, Law, Liter	Psychological Disorders	No (please, go to question 15)			Yes	No (please, go to question 19)	
Training course in transl	Business, Economics an	Mobility and Physical In	Yes	Desk, Electronic wheel-chair		Yes	Yes	Mouse: Trackballs
Master's degree in transl	Business, Gastronomy, I	Balbuties	No (please, go to question 15)			No, and I don’t intend to	No (please, go to question 19)	
Bachelor's degree in tran	Business, Computer Sci	Vision Disability: Comp	No (please, go to question 15)			No, and I don’t intend to	Yes	Braille reading devices
Post-graduate course in t	Literature, Medicine	Vision Disability: Partia	Yes	Desk, Chair, Hand equip	Desk with a lowered, pu	Yes	Yes	Keyboard, Mouse: Track
No degree or training in	Computer Science, Fash	Psychological Disorders	Yes	Chair	The chair should be high	No, but I intend to do so	Yes	Keyboard, Mouse: Track
Training course in transl	Business, Literature, Me	Vision Disability: Partia	No (please, go to question 15)			Yes	No (please, go to question 19)	
Training course in transl	Gastronomy, Marketing,	Spinal Cord Disability	No (please, go to question 15)			No, and I don’t intend to	No (please, go to question 19)	
No degree or training in	Business, Economics an	Vision Disability: Partia	No (please, go to question 15)			No, and I don’t intend to	Yes	Screen
Master's degree in transl	Environment, Marketing	Mobility and Physical In	No (please, go to question 15)			Yes	No (please, go to question 19)	
Master's degree in transl	Computer Science, Med	Mobility and Physical In	Yes	Desk	Desk at a special height	Yes	Yes	Keyboard, Microphone
No degree or training in	Medicine, Pharmacy	Psychological Disorders	No (please, go to question 15)			No, and I don’t intend to	No (please, go to question 19)	
Master's degree in transl	Computer Science, Ecor	Cognitive or Learning D	No (please, go to question 15)			Yes	No (please, go to question 19)	
Master's degree in transl	Business, Economics an	Cognitive or Learning D	No (please, go to question 15)			Yes	No (please, go to question 19)	
Training course in transl	Law, Pharmacy	Mobility and Physical In	No (please, go to question 15)			No, but I intend to do so	No (please, go to question 19)	
Master's degree in transl	Computer Science, Liter	Vision Disability: Comp	No (please, go to question 15)			No, and I don’t intend to	No (please, go to question 19)	
Training course in transl	Environment, Law, Spor	Mobility and Physical In	No (please, go to question 15)			No, and I don’t intend to	No (please, go to question 19)	
No degree or training in	Business, Gastronomy, I	Mobility and Physical In	No (please, go to question 15)			Yes	No (please, go to question 19)	
No degree or training in	Biology, Business, Chen	Mobility and Physical In	No (please, go to question 15)			Yes	Yes	Keyboard
Master's degree in transl	Art, Literature	Vision Disability: Comp	No (please, go to question 15)			Yes	Yes	Braille reading devices,
No degree or training in	Multimedia, Videogami	Vision Disability: Partia	No (please, go to question 15)			No, but I intend to do so	No (please, go to question 19)	

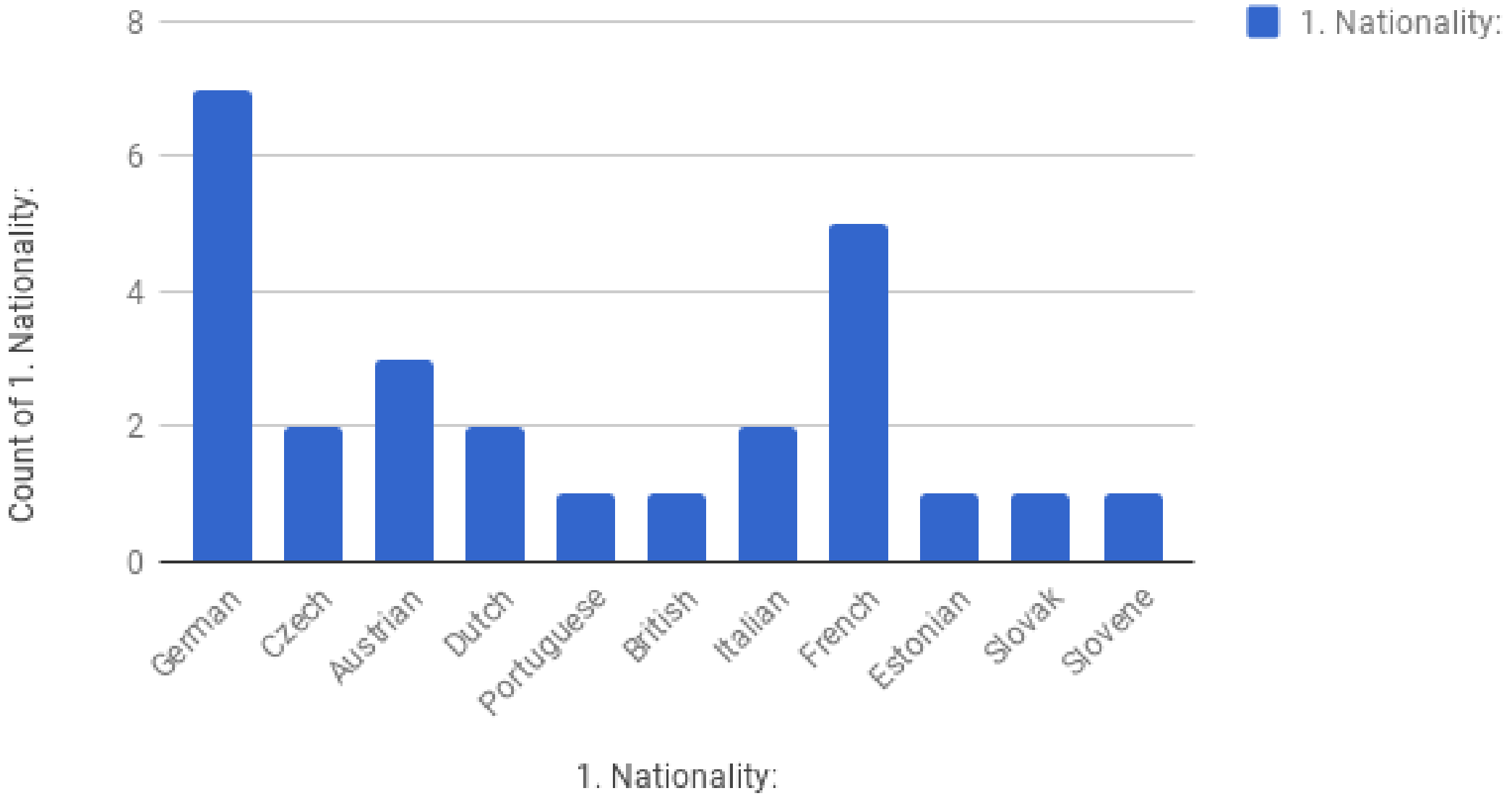
18. Please list the equipr	19. Which operating sys	20. Which Computer-as	21. Do you require speci	22. If you replied “yes” t	23. Please list the softwa	24. Do you use the afore	25. If you replied “yes” t	26. Do you require speci
	Microsoft Windows	Across	No (please, go to question 26)					No (please, go to questio
	Microsoft Windows	Wordfast Pro	No (please, go to question 26)					No (please, go to questio
JAws, Braille Display, S	Microsoft Windows	I don’t use CAT-Tools, S	Yes	Computer access softwa	JAWS, Screenrader	Yes, but they don’t work	With JAWS 17 and Win	Yes
	macOS	Wordfast Anywhere, Ca	Yes	Voice recognition software		Yes, but they don’t work	not all voice orders work	No (please, go to questio
Active Braille by Handy Tech - 40-cell braille display								
	Microsoft Windows	I don’t use CAT-Tools	Yes	screen reader software	Jaws	Yes, but they don’t work	Regarding CAT tools, I	No (please, go to questio
	Microsoft Windows	Across	No (please, go to question 26)					No (please, go to questio
	Microsoft Windows	SDL Trados / SDL Stud	No (please, go to question 26)					No (please, go to questio
	Microsoft Windows	MemoQ	No (please, go to question 26)					No (please, go to questio
Braille display to read th	Microsoft Windows	I don’t use CAT-Tools	Yes	Computer access software, screen reader softwar		No, I don’t use CAT-Tools		Yes
ergonomic keyboard and	Microsoft Windows	SDL Trados / SDL Stud	No (please, go to question 26)					Yes
:balls	Microsoft Windows	Across, MemoQ, Passol	Yes	Voice recognition softw	Dragon Natural Speakin	Yes, and all work with all CAT-Tools		No (please, go to questio
	macOS	I don’t use CAT-Tools	No (please, go to question 26)					Yes
	Microsoft Windows	I don’t use CAT-Tools	No (please, go to question 26)					No (please, go to questio
Two screens	Microsoft Windows	SDL Trados / SDL Stud	No (please, go to question 26)					Yes
	Microsoft Windows	Across, MemoQ, SDL T	No (please, go to question 26)					No (please, go to questio
Mini-keyboard	Microsoft Windows	Passolo, SDL Trados / S	Yes	Voice recognition softw	Dragon Naturally Speak	Yes, but they don’t work	Tstream Editor	Yes
	Microsoft Windows	I don’t use CAT-Tools	No (please, go to question 26)					Yes
	Microsoft Windows	SDL Trados / SDL Stud	No (please, go to question 26)					Yes
	Microsoft Windows	SDL Trados / SDL Stud	No (please, go to question 26)					No (please, go to questio
	Microsoft Windows	SDL Trados / SDL Stud	No (please, go to question 26)					No (please, go to questio
	Microsoft Windows	I don’t use CAT-Tools	Yes	Screen reader	I am using the screen re	No, I don’t use CAT-Tools		No (please, go to questio
	Microsoft Windows	SDL Trados / SDL Stud	No (please, go to question 26)					No (please, go to questio
	Microsoft Windows	Across, Passolo, SDL Ti	No (please, go to question 26)					No (please, go to questio
	Microsoft Windows	I don’t use CAT-Tools	No (please, go to question 26)					No (please, go to questio
Speech generating device	Microsoft Windows	I don’t use CAT-Tools	Yes			No, I don’t use CAT-Tools		Yes
	Microsoft Windows	MemoQ	No (please, go to question 26)					No (please, go to questio

27. If you replied “yes” t	28. Do you use the afore	29. If you replied “yes” t	30. Do you use Voice R	31. If you replied “yes” to question 30, which type of software (choose all that may apply)?	32. Do you use the aforementioned Voice Recognition software within your CAT-Tools?	33. If you replied “yes” to question 32, but they fail to work in all CAT-Tools, please specify the exceptions (program and CAT-	Email:
n 30)			No (please, go to the end)				
n 30)			Yes	Dragon Naturally Speaking	Yes, and all work with all CAT-Tools		hana.jarolimova@email.cz
Adaptation of keyboard :	Yes, but they don’t work	With trados I used the ca	No (please, go to the end)				ursula_raunig@gmx.at
n 30)			Yes	Dragon Naturally Speaking	Yes, but they don’t work with all CAT-Tools	I only tried it with Wordfast anywhere and CafeTran, it works but not always very good.	
n 30)			No (please, go to the end)				daniela.dold@utanet.at
n 30)			No (please, go to the end)				info@zopf-anne.de
n 30)			No (please, go to the end)				T.Kleinau@t-online.de
n 30)			No (please, go to the end)				cbdeus@yahoo.de
Adaptation of keyboard :	No, I don’t use CAT-Tools		No (please, go to the end)				
Magnification of text an	Yes, but they don’t work	Icons in SDL Trados are	Yes	Dragon Naturally Speaking	No, I don’t use voice recognition software within CAT-Tools		
n 30)			Yes	Dragon Naturally Speaking	Yes, and all work with all CAT-Tools		ymkje@lochside.nl
Magnification of text an	No, I don’t use CAT-Tools		Yes	Siri and Apple Dictation	No, I don’t use voice recognition software within CAT-Tools		
n 30)			No (please, go to the end)				davidlfer97@hotmail.com
Magnification of text an	Yes, but they don’t work with all CAT-Tools		No (please, go to the end)				pg@language-for-clarity.de
n 30)			No (please, go to the end)				
Adaptation of keyboard :	Yes, but they don’t work	Tstream Editor	Yes	Dragon Naturally Speaking	Yes, but they don’t work with all CAT-Tools	Tstream Editor	emilie.devrainne@gmail.com
Magnification of text an	No, I don’t use CAT-Tools		No (please, go to the end)				urmasre@hot.ee
Magnification of text an	Yes, and all work with all CAT-Tools		Yes	Dragon Naturally Speaking	No, I don’t use voice recognition software within CAT-Tools		
n 30)			No (please, go to the end)				barbara.pissane@free.fr
n 30)			No (please, go to the end)				
n 30)			No (please, go to the end)				michal.homola55@gmail.com
n 30)			Yes	Dragon Naturally Speaking	Yes, and all work with all CAT-Tools		ivan.gopcevic@gmail.com
n 30)			No (please, go to the end)				janez.mervar2@gmail.com
n 30)			No (please, go to the end)				c.e.viennot@gmail.com
Narrator option, Sound r	No, I don’t use CAT-Tools		No (please, go to the end)				jirina.holenova@centrum.cz
n 30)			No (please, go to the end)				

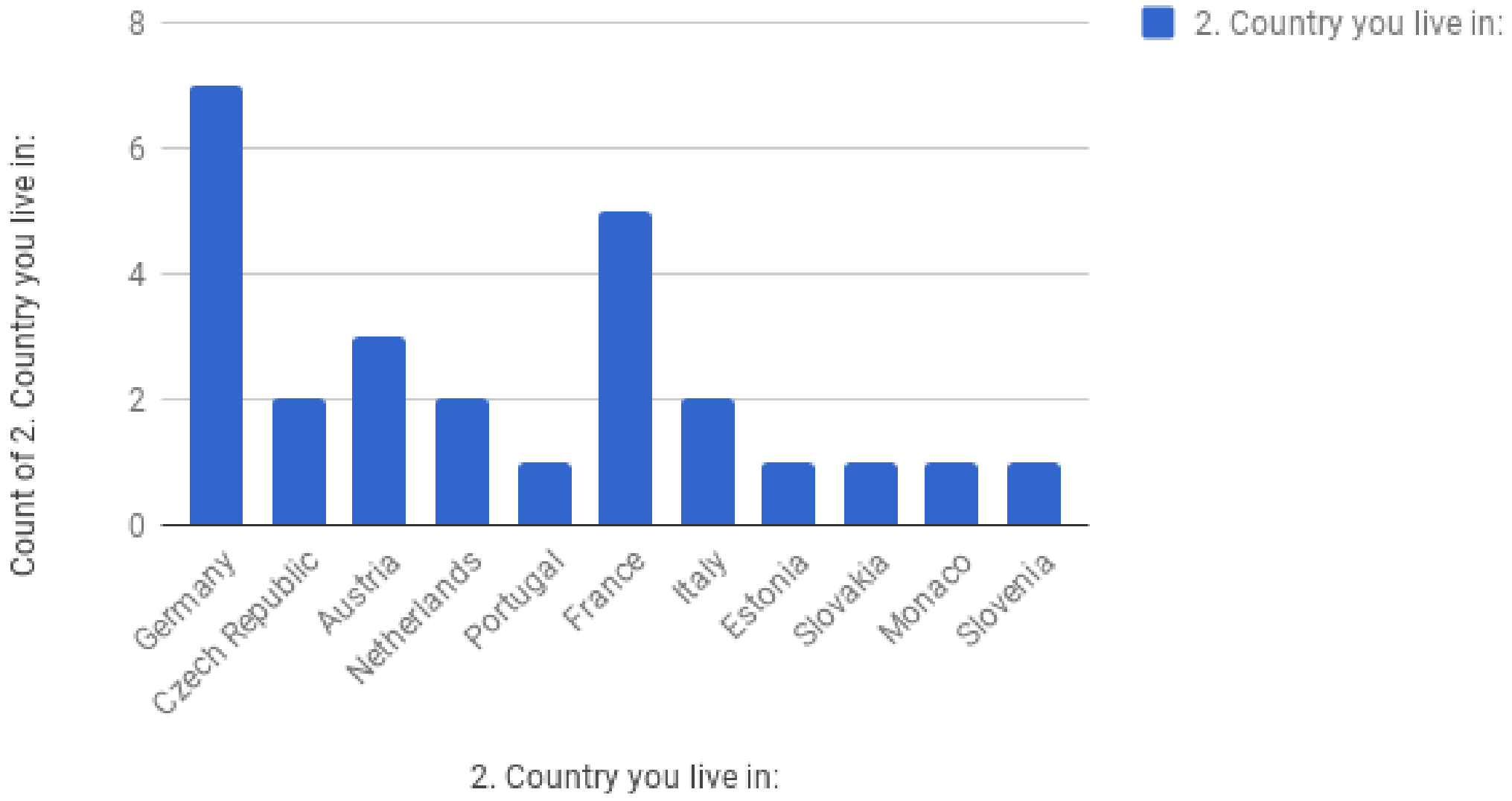
APPENDIX H

RESULTS FROM THE QUESTIONNAIRE “DISABLED TRANSLATORS’ USE OF TECHNOLOGY: PRESENT REALITY AND FUTURE POSSIBILITIES” IN GRAPHS

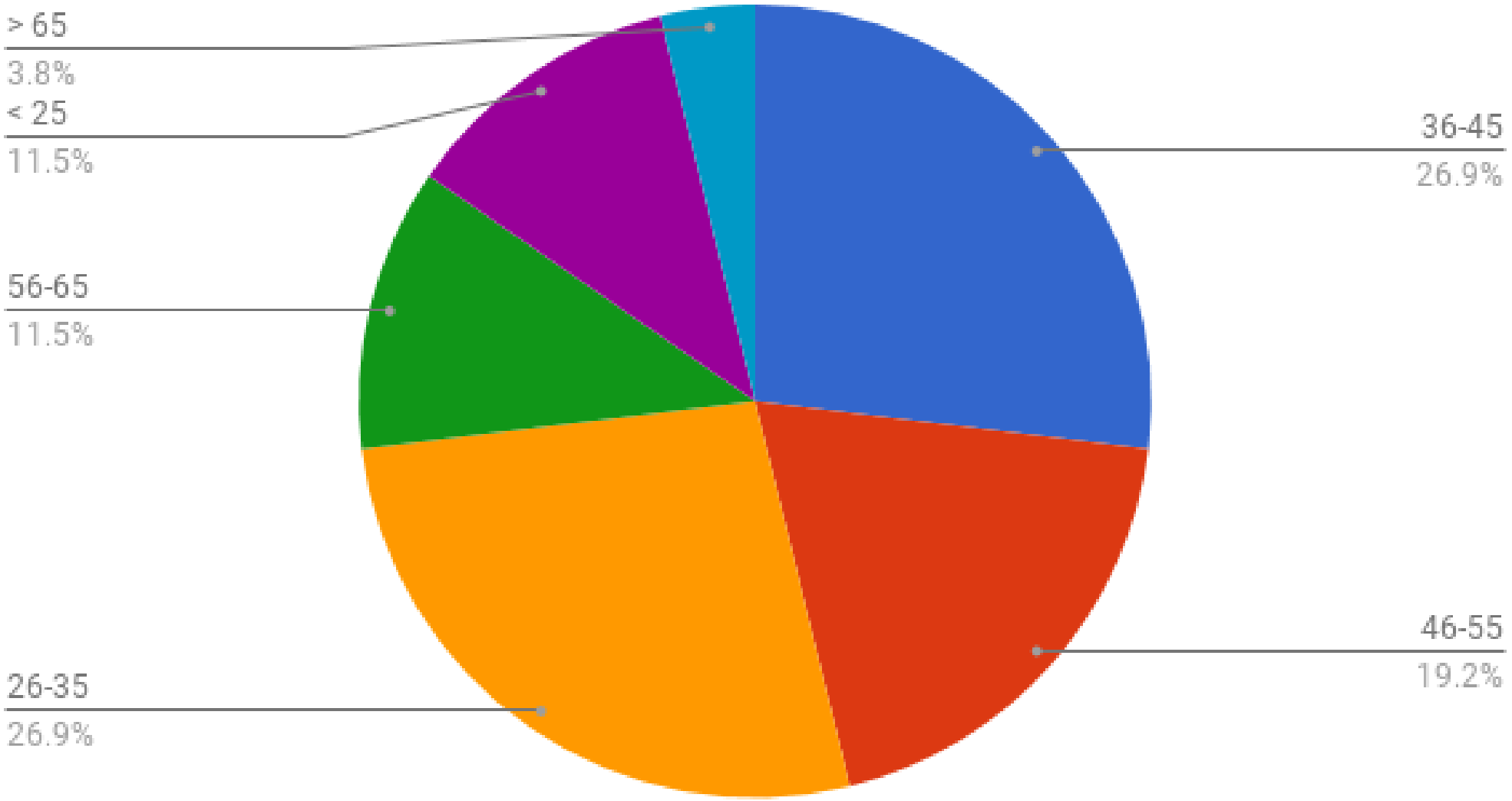
1. Nationality:



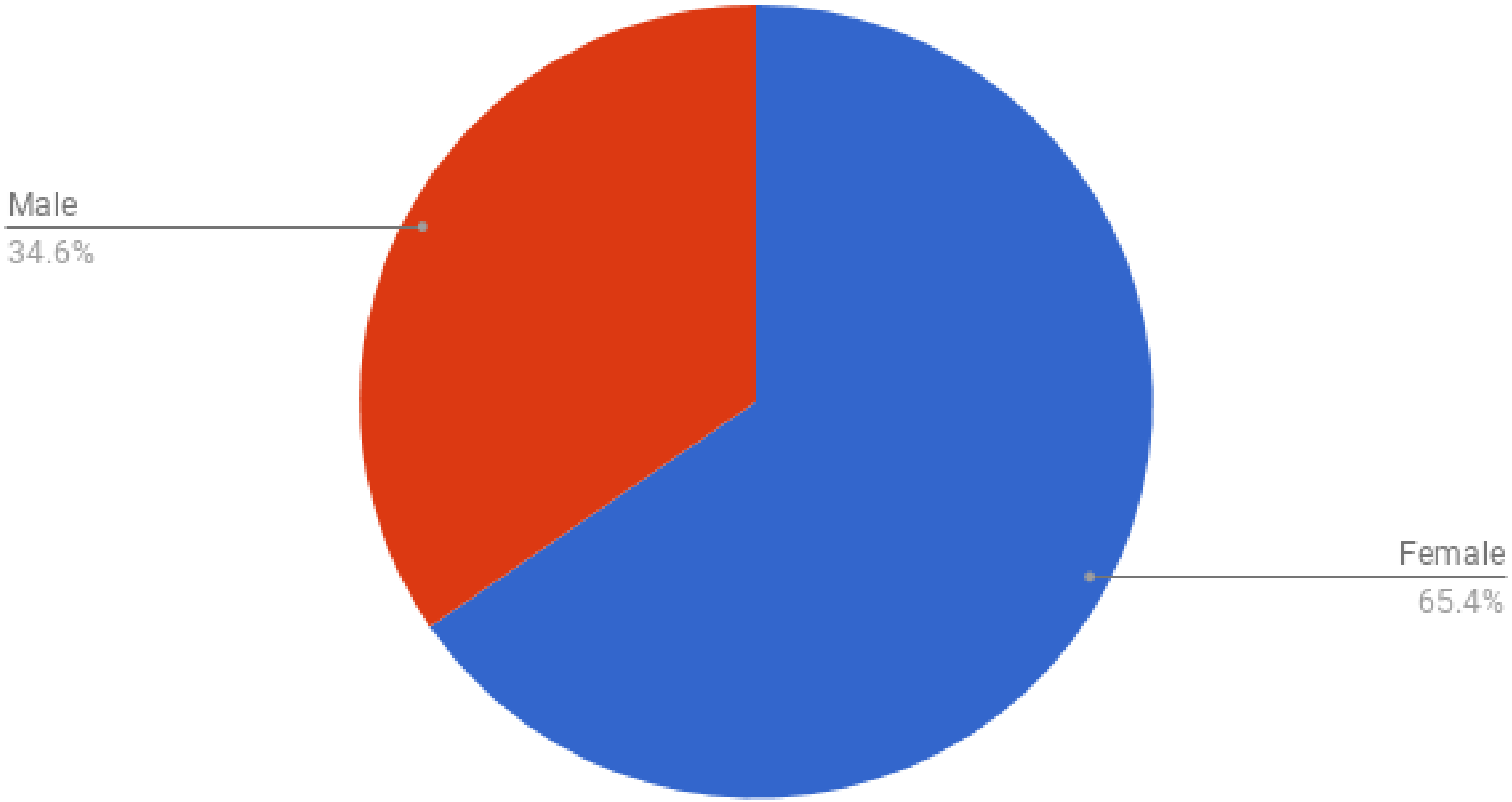
2. Country you live in:



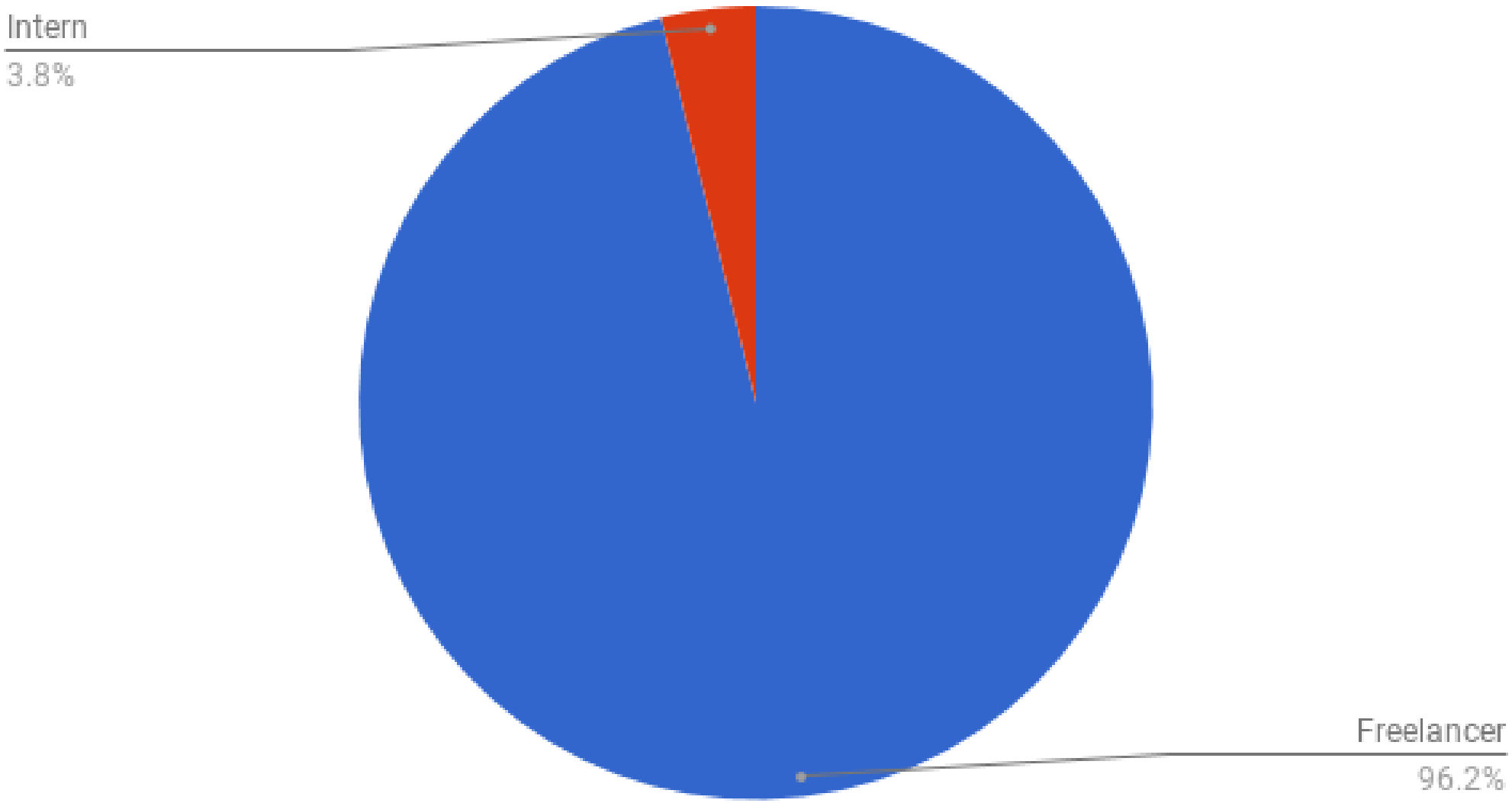
3. Age:



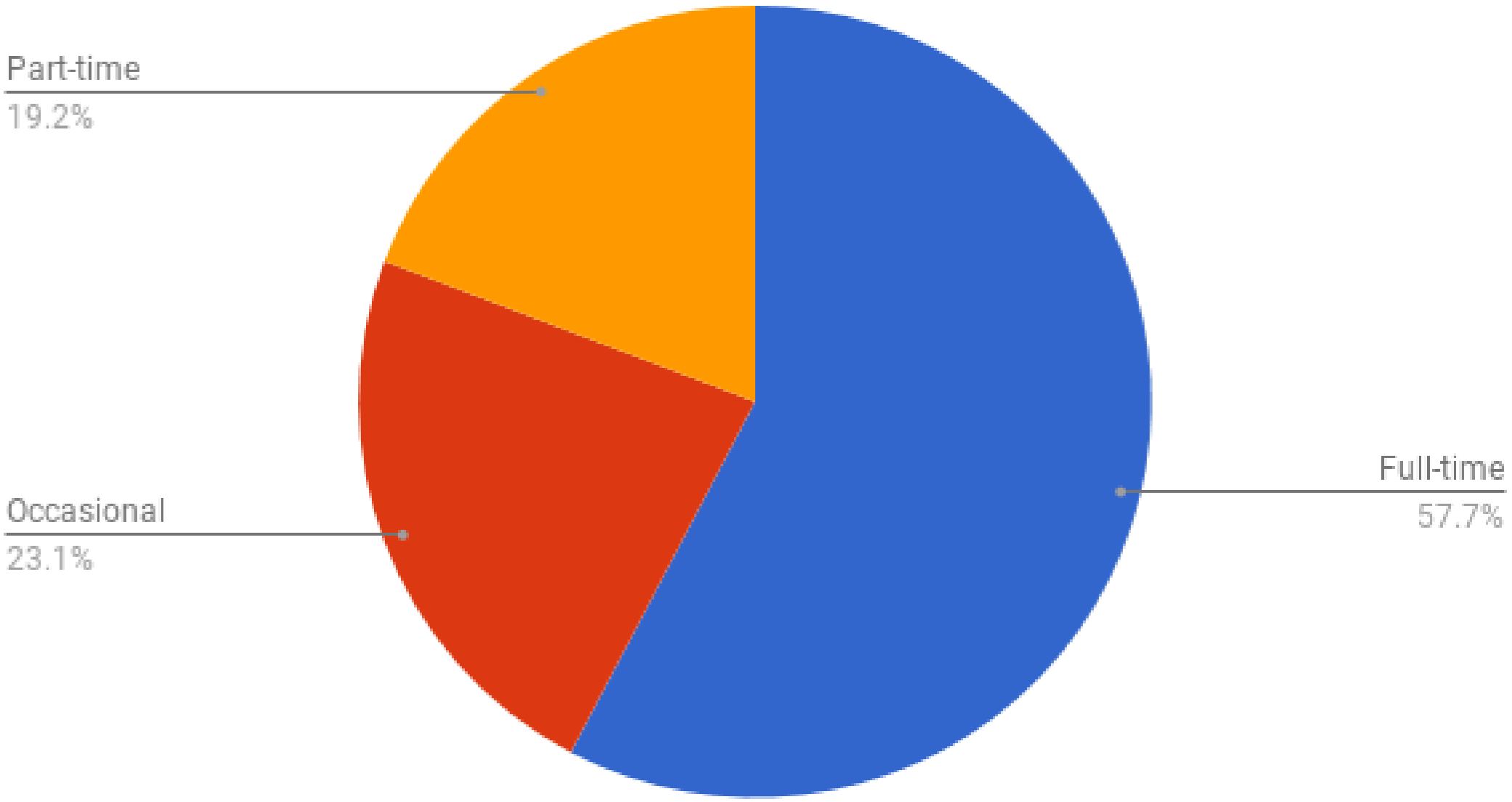
4. Gender:



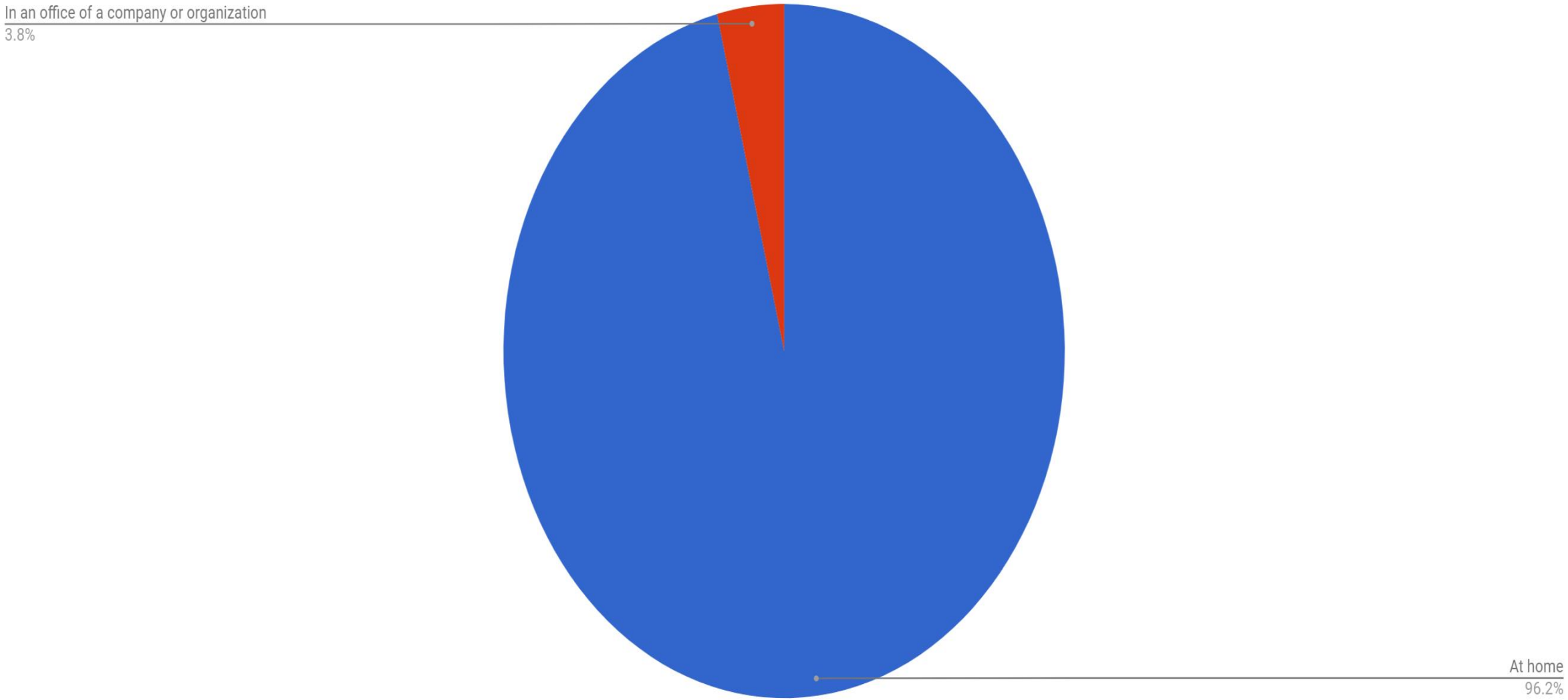
5. Professional situation:



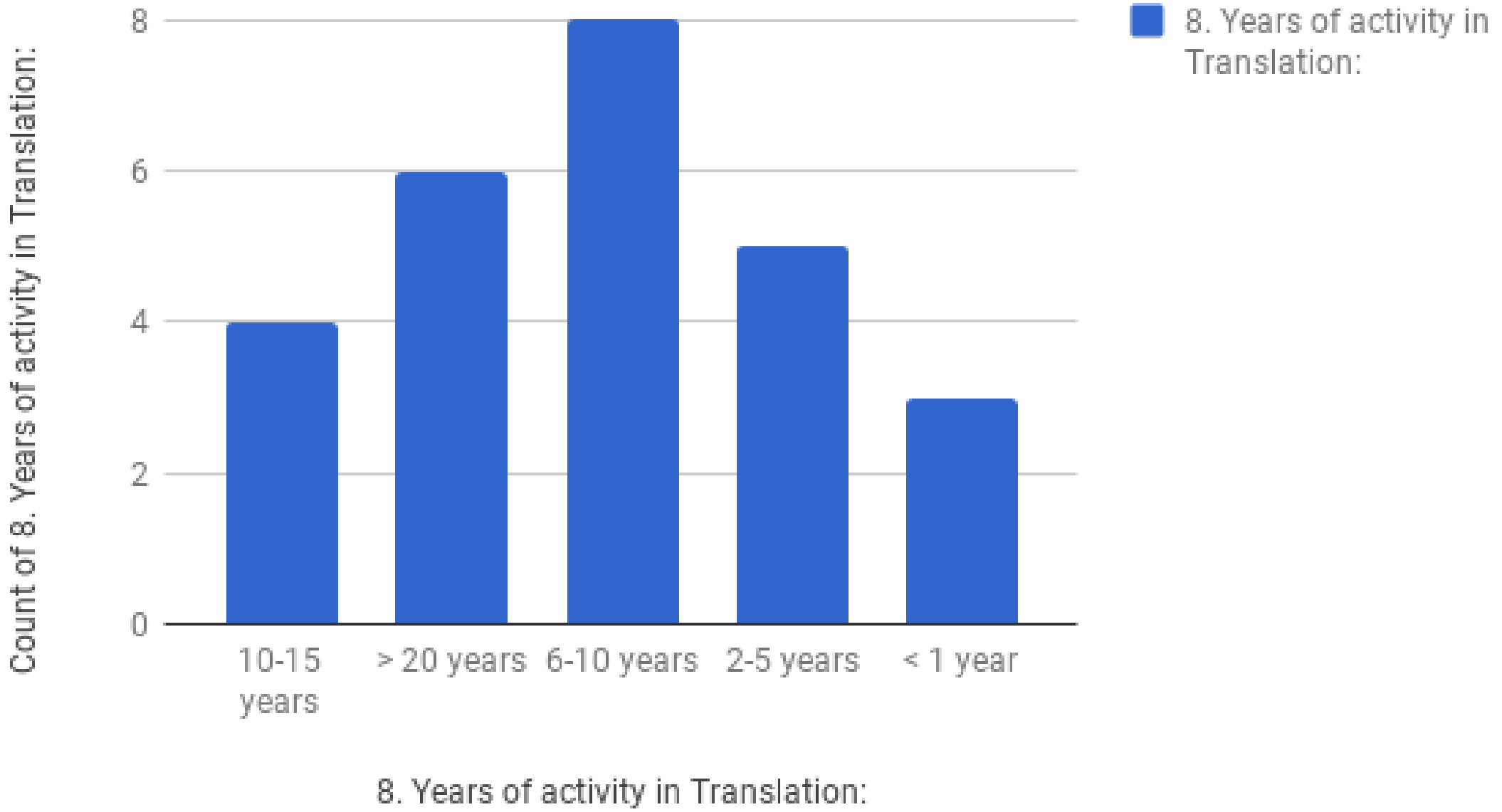
6. Professional situation:



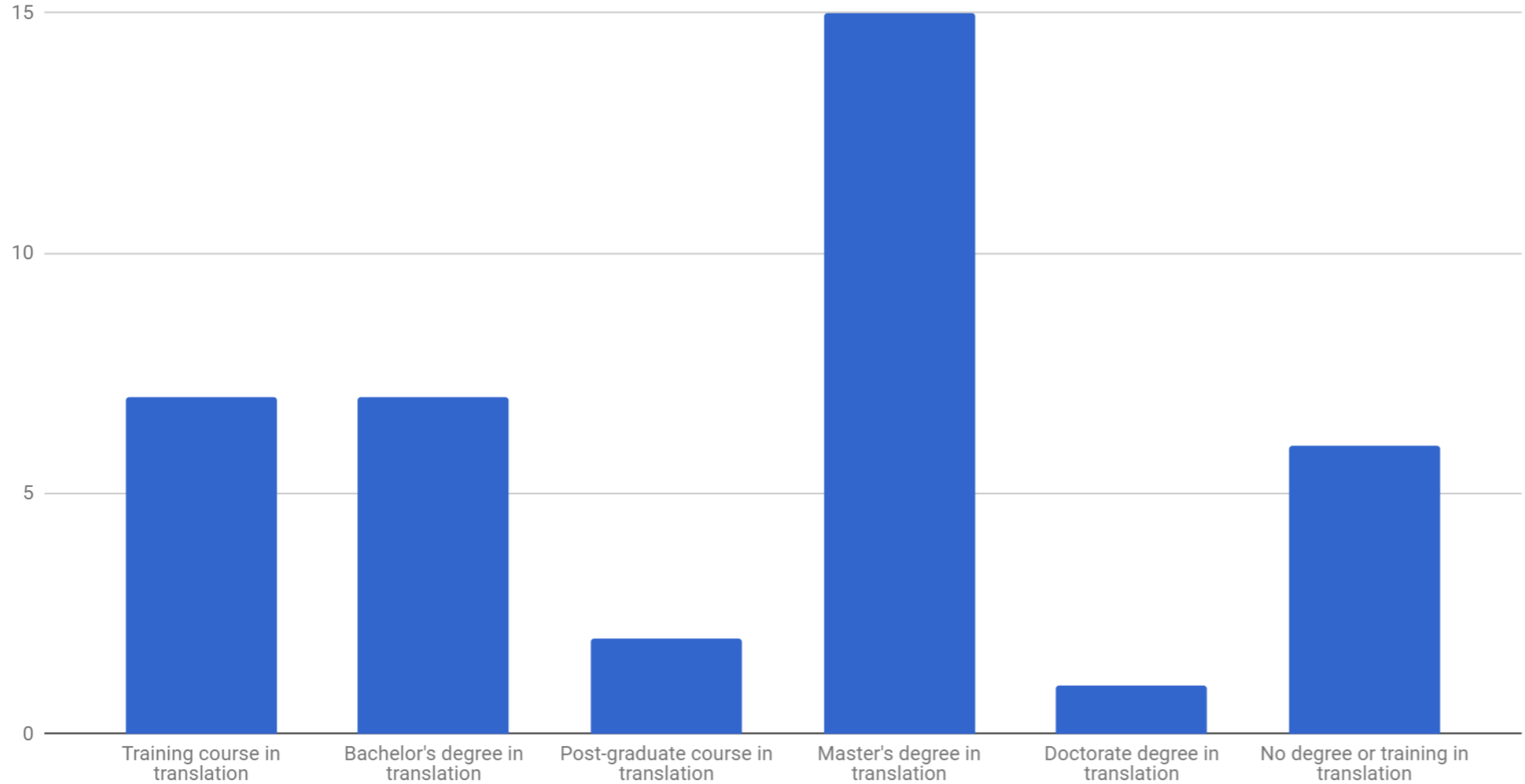
7. Where is your main place of work?



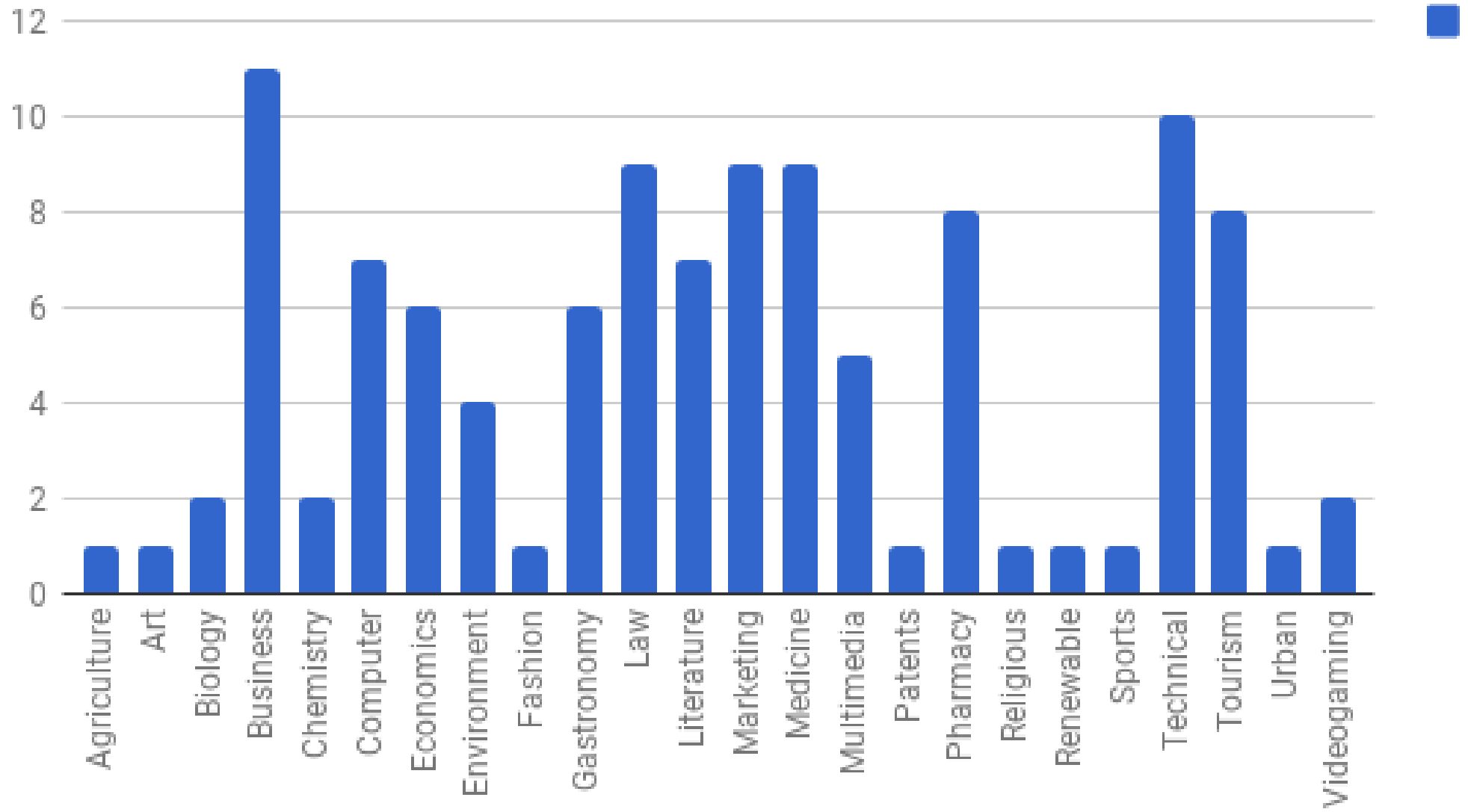
8. Years of activity in Translation:



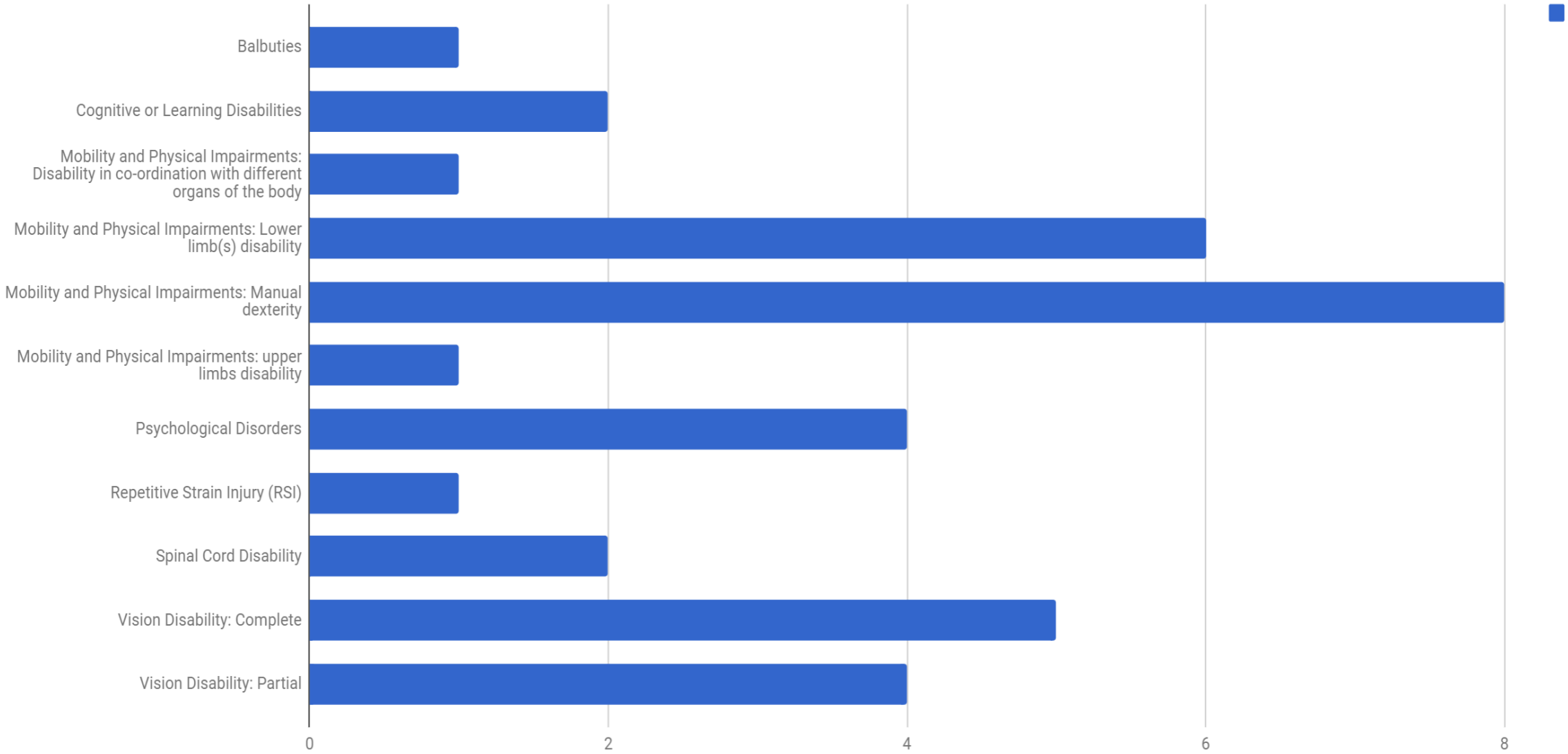
9. Educational qualifications in Translation



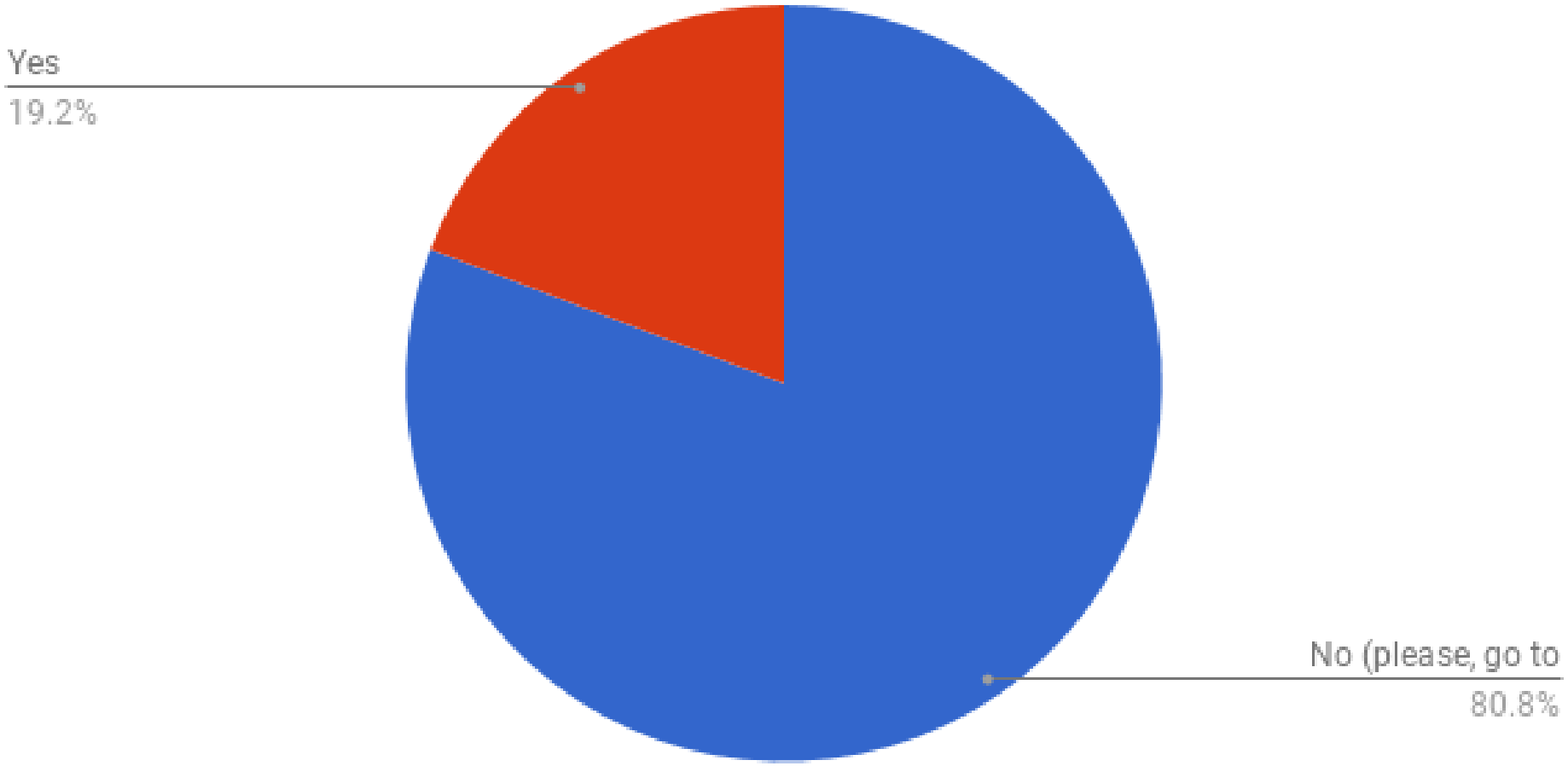
10. Specialties



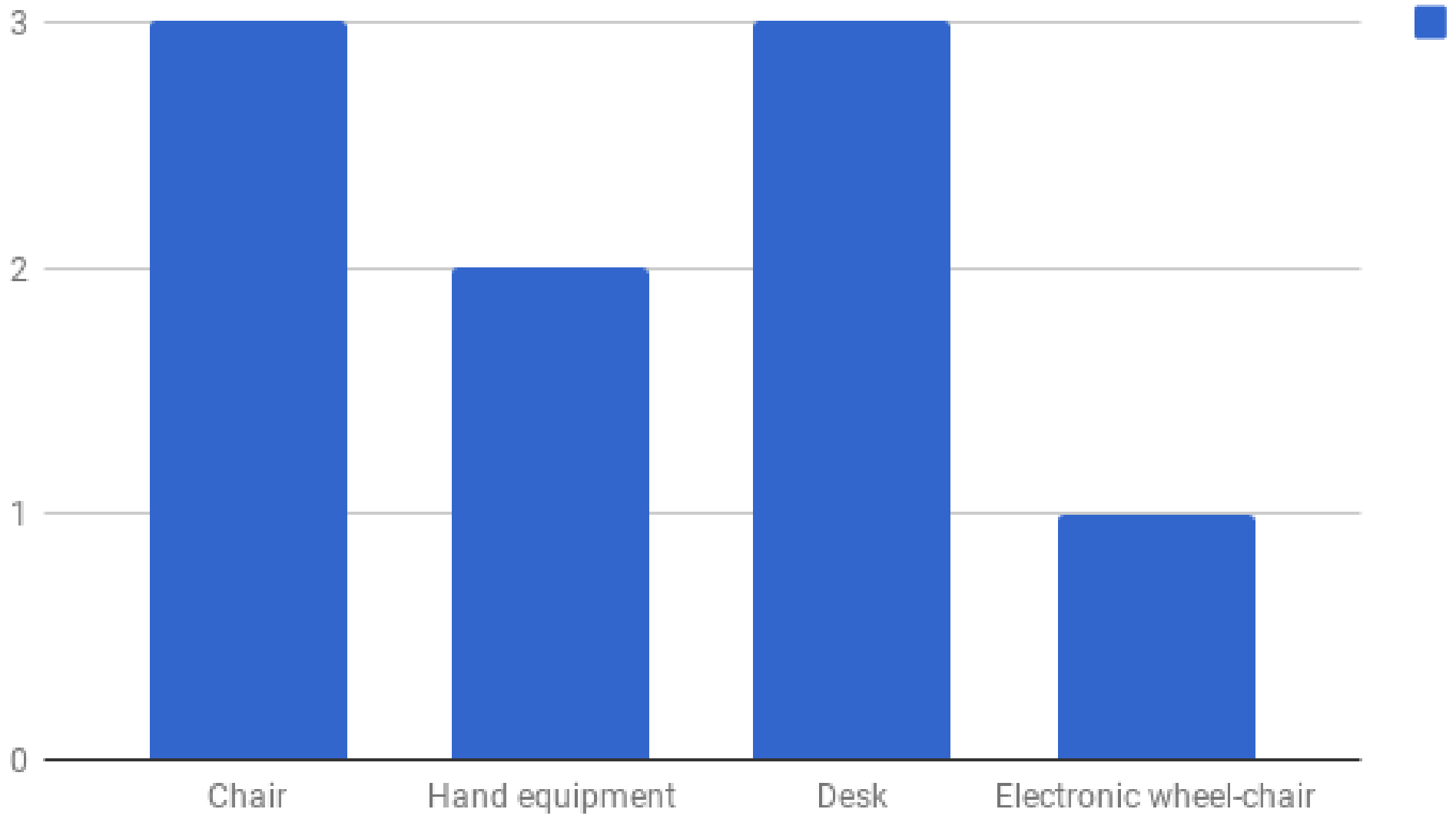
11. Type of disability



12. Do you require special furniture/workplace equipment in order to translate?

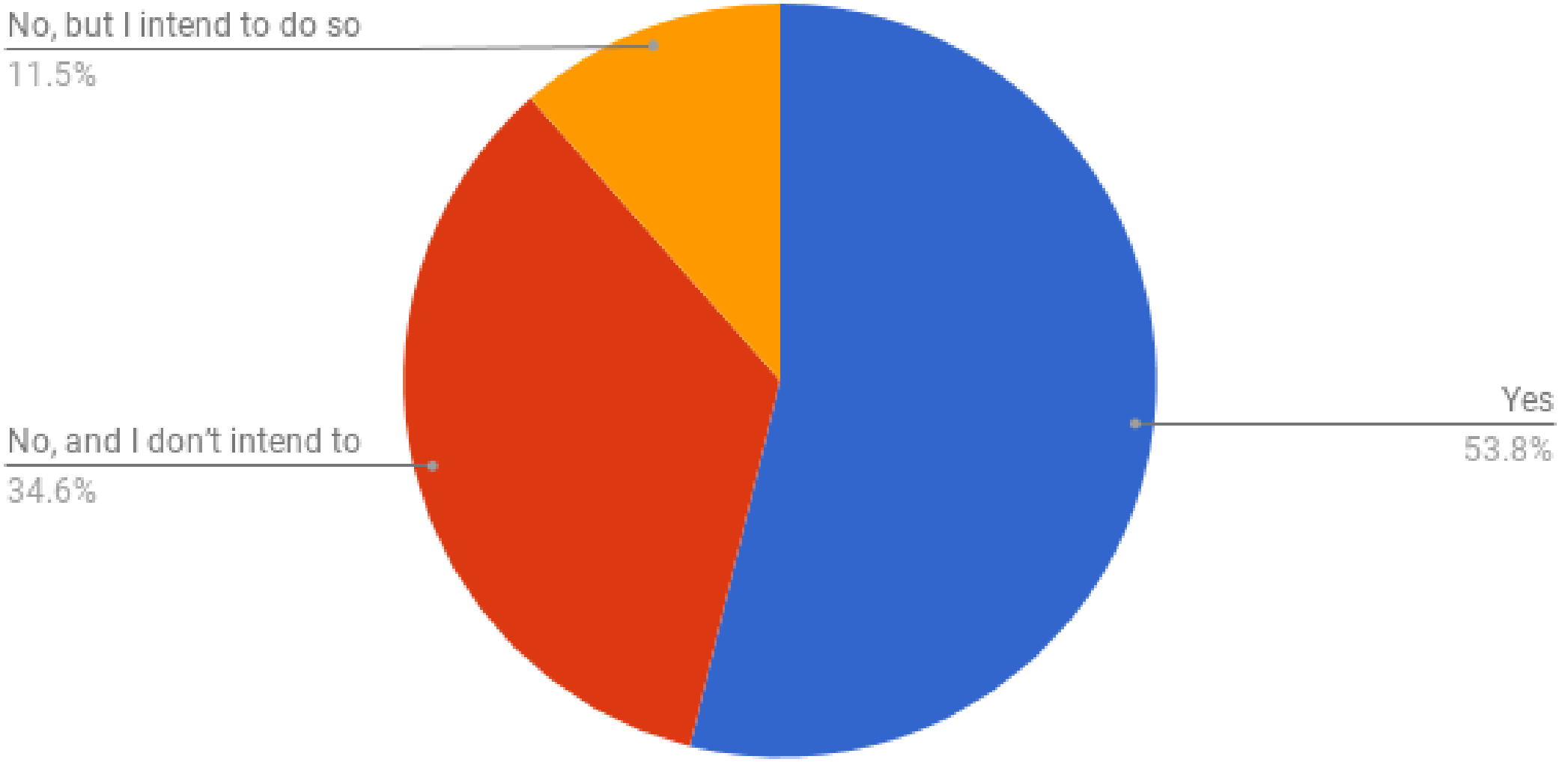


13. If you replied “yes” to question 12, which type?

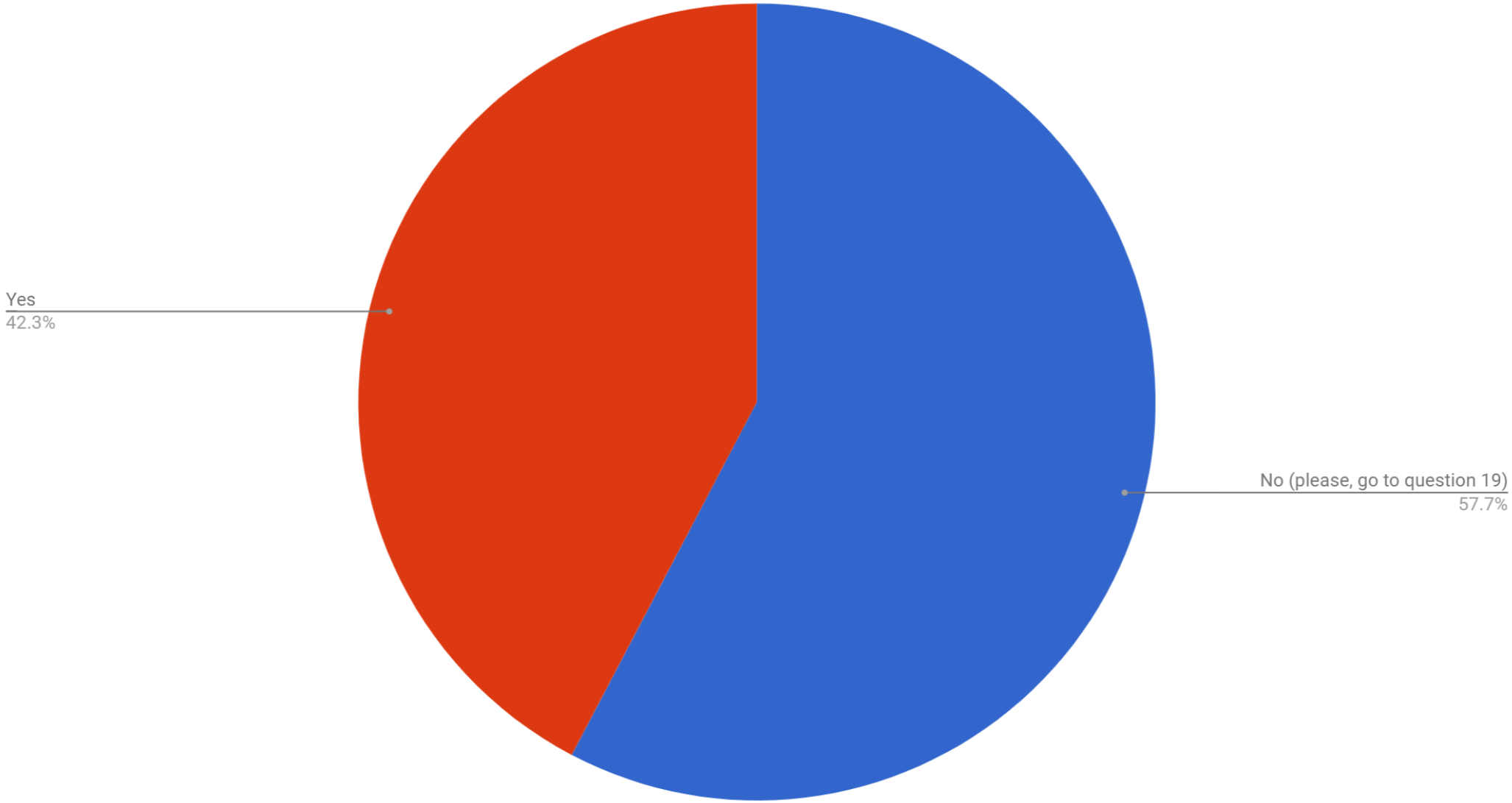


	14. In case of "yes" in question 12, please list the equipment (please be as specific as possible):
ergonomic keyboard, ergonomic chair	1
Desk with a lowered, pullable keyboard rest; ergonomic chair	1
The chair should be high, with armrests that are higher than usual, so that I won't have to lean with my wrists on the desk.	1
Desk at a special height	1

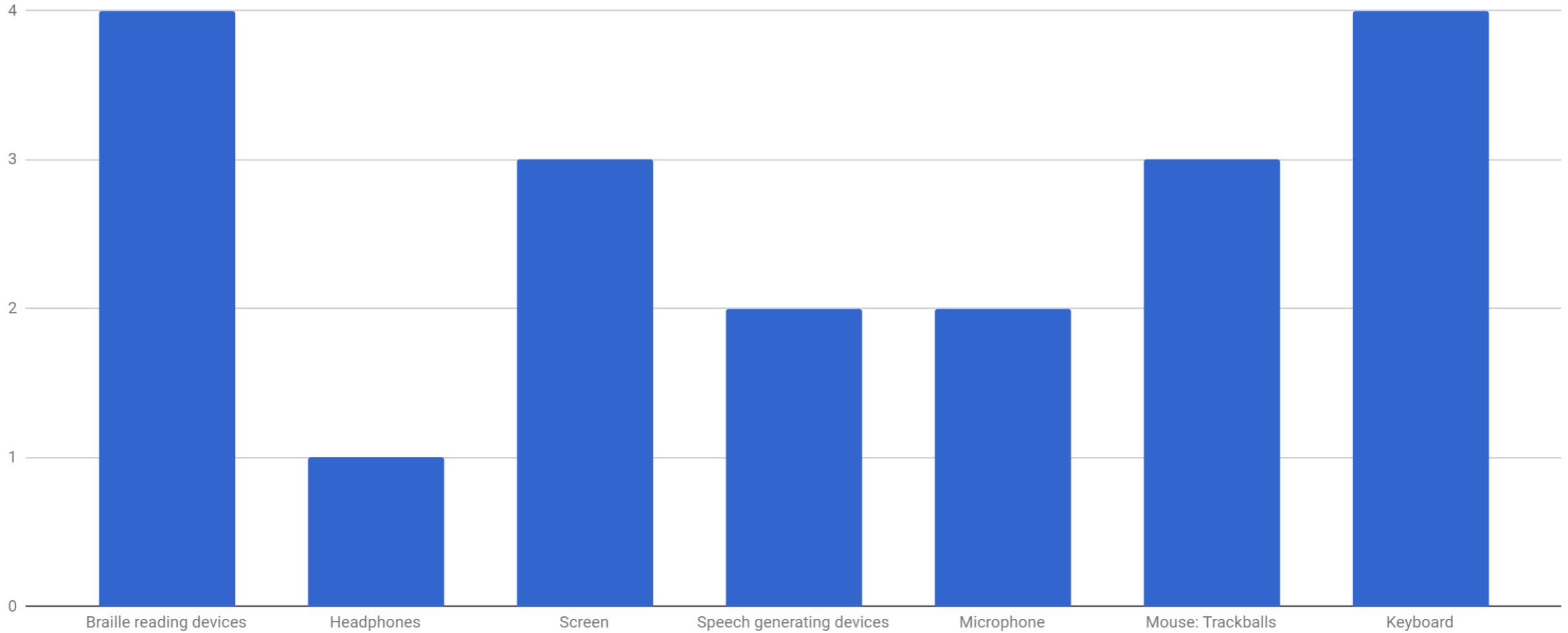
15. Have you done exercises to improve mobility and stimulate relaxation?



16. Do you require special hardware equipment in order to translate?

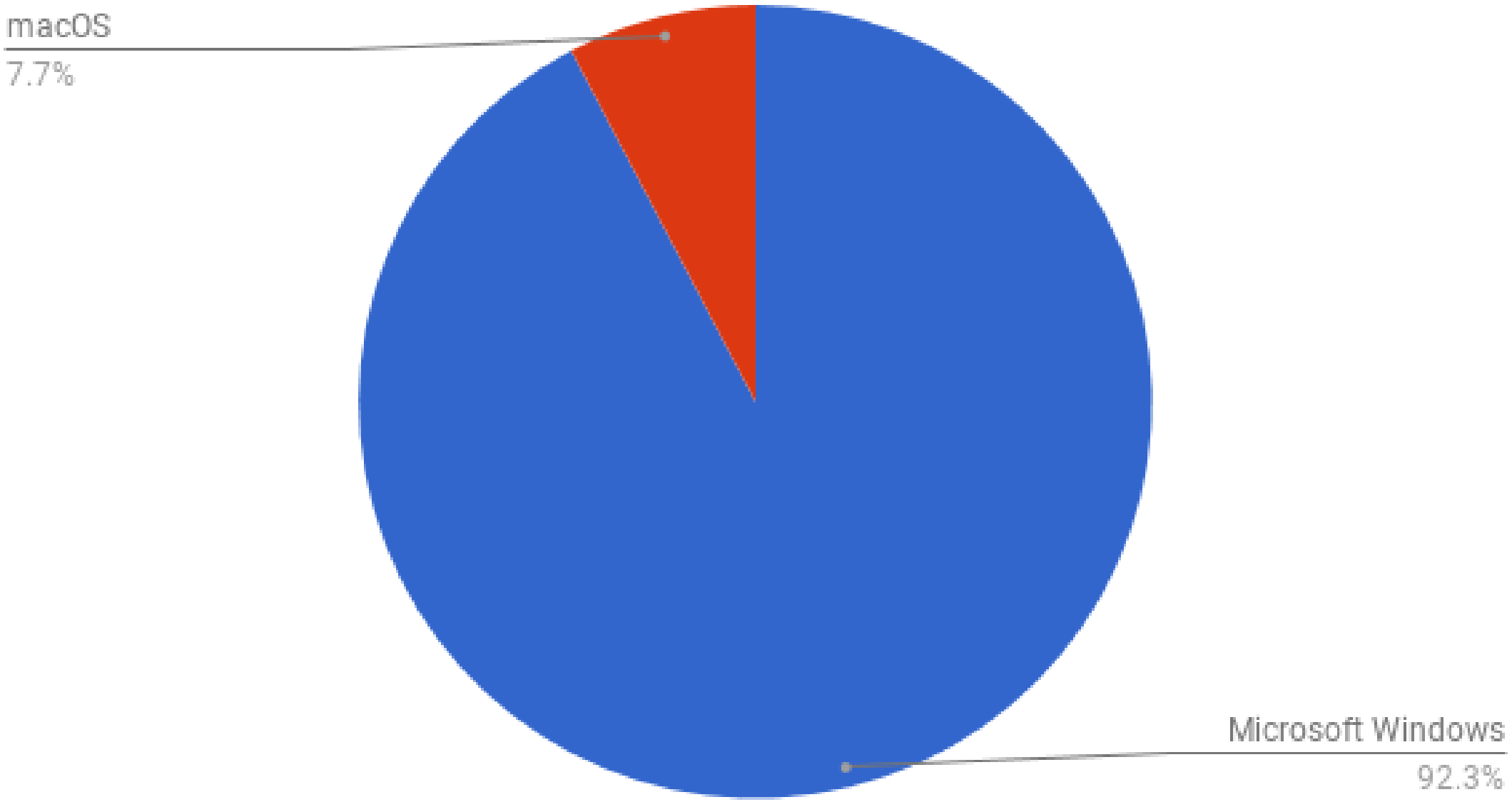


17. If you replied “yes” to question 16, which type?

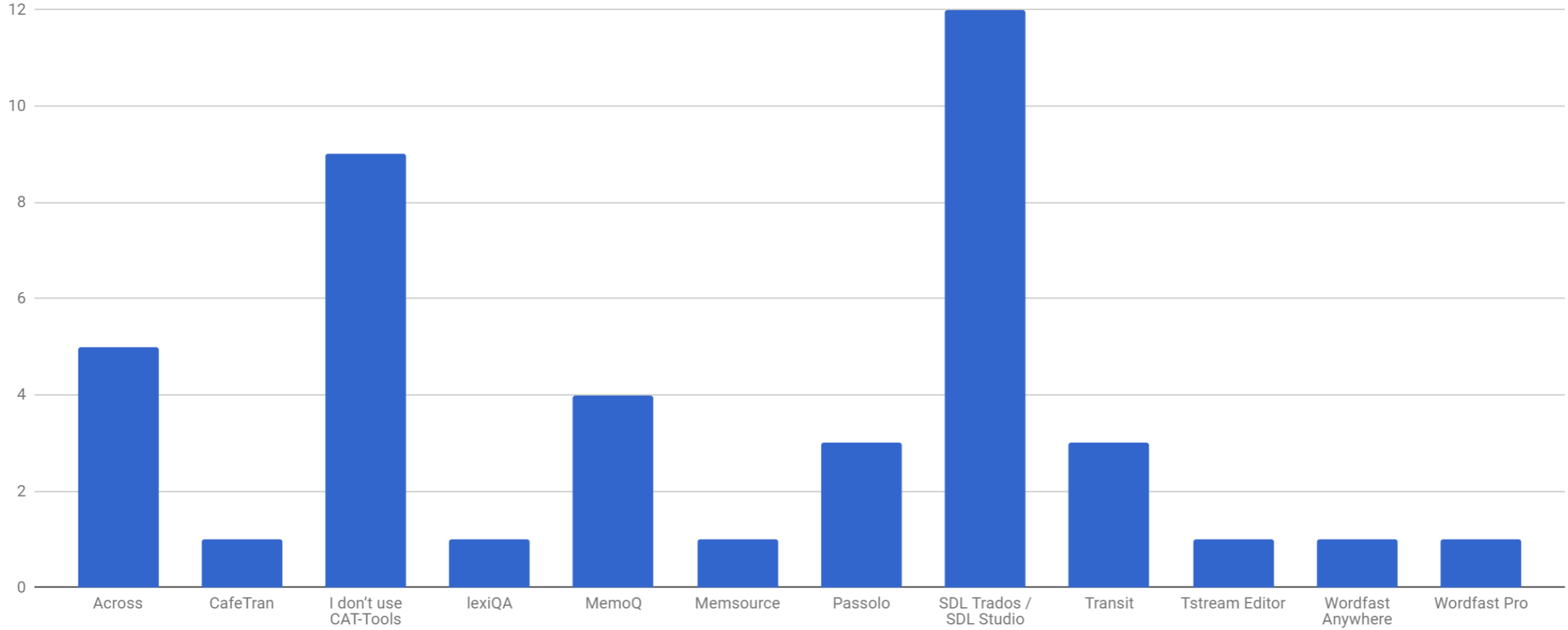


	18. Please list the equipment selected previously (please be as specific as possible):
JAws, Braille Display, Spach.	
Active Braille by Handy Tech - 40-cell braille display	
Braille display to read the content displayed on the computer, Screen reader to recognise the content.	
ergonomic keyboard and mouse; 2 not too broad curved screens in a special angle	
Dragon speech recognition	
Two screens	
Mini-keyboard	

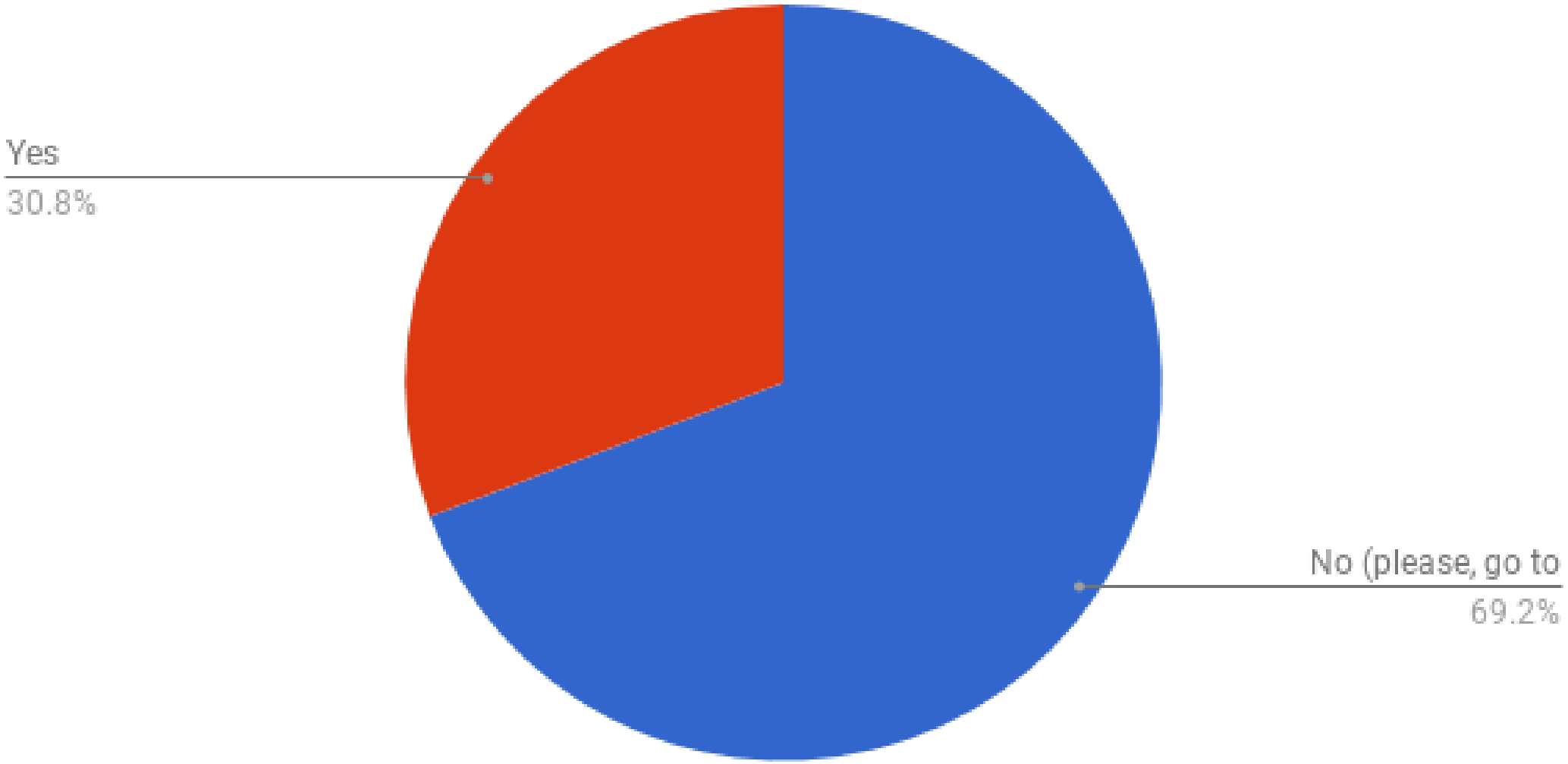
19. Which operating system do you use in order to translate?



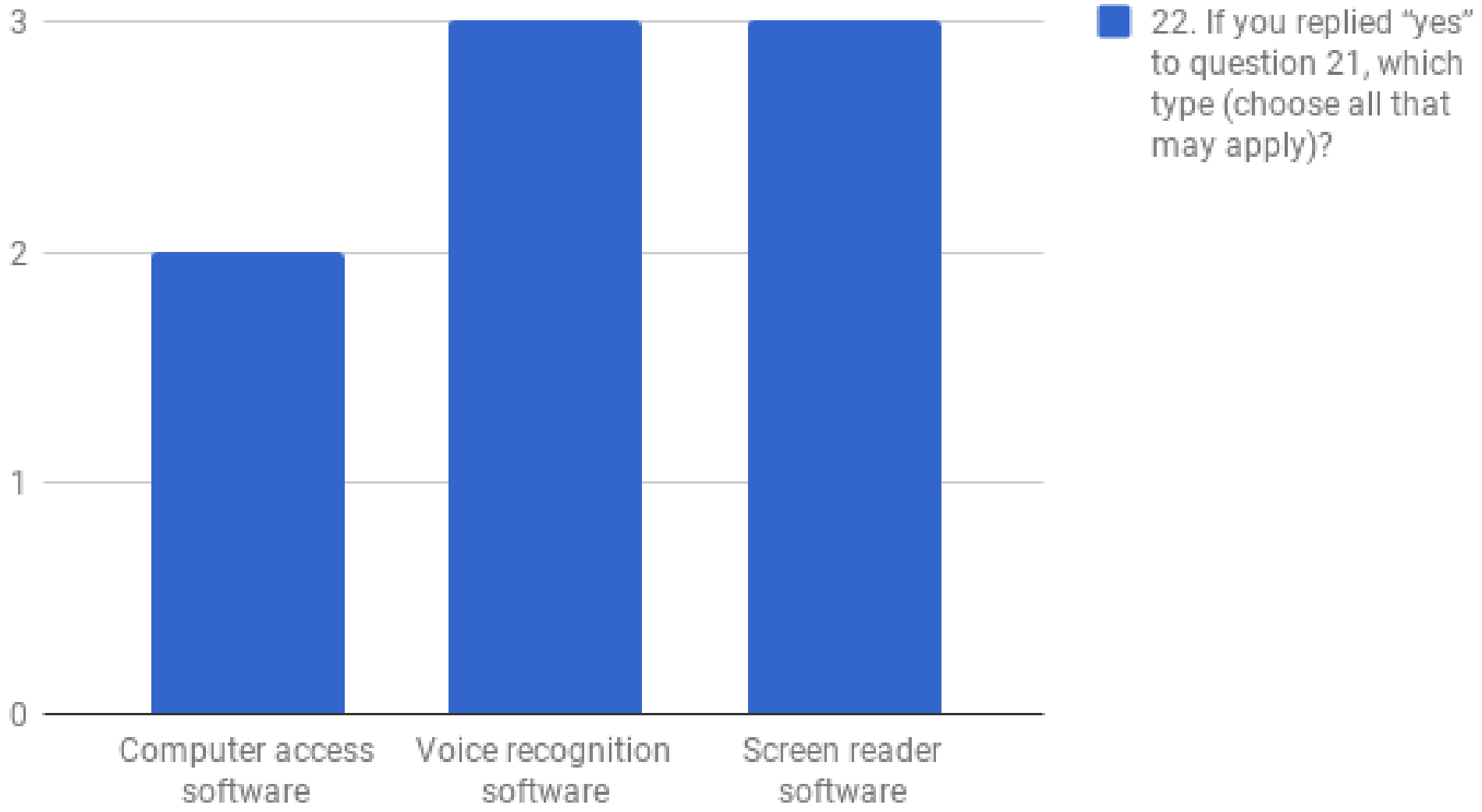
20. Which Computer-assisted Translation Tool (CAT-Tool) do you use in order to translate?



21. Do you require special software installed in order to translate?

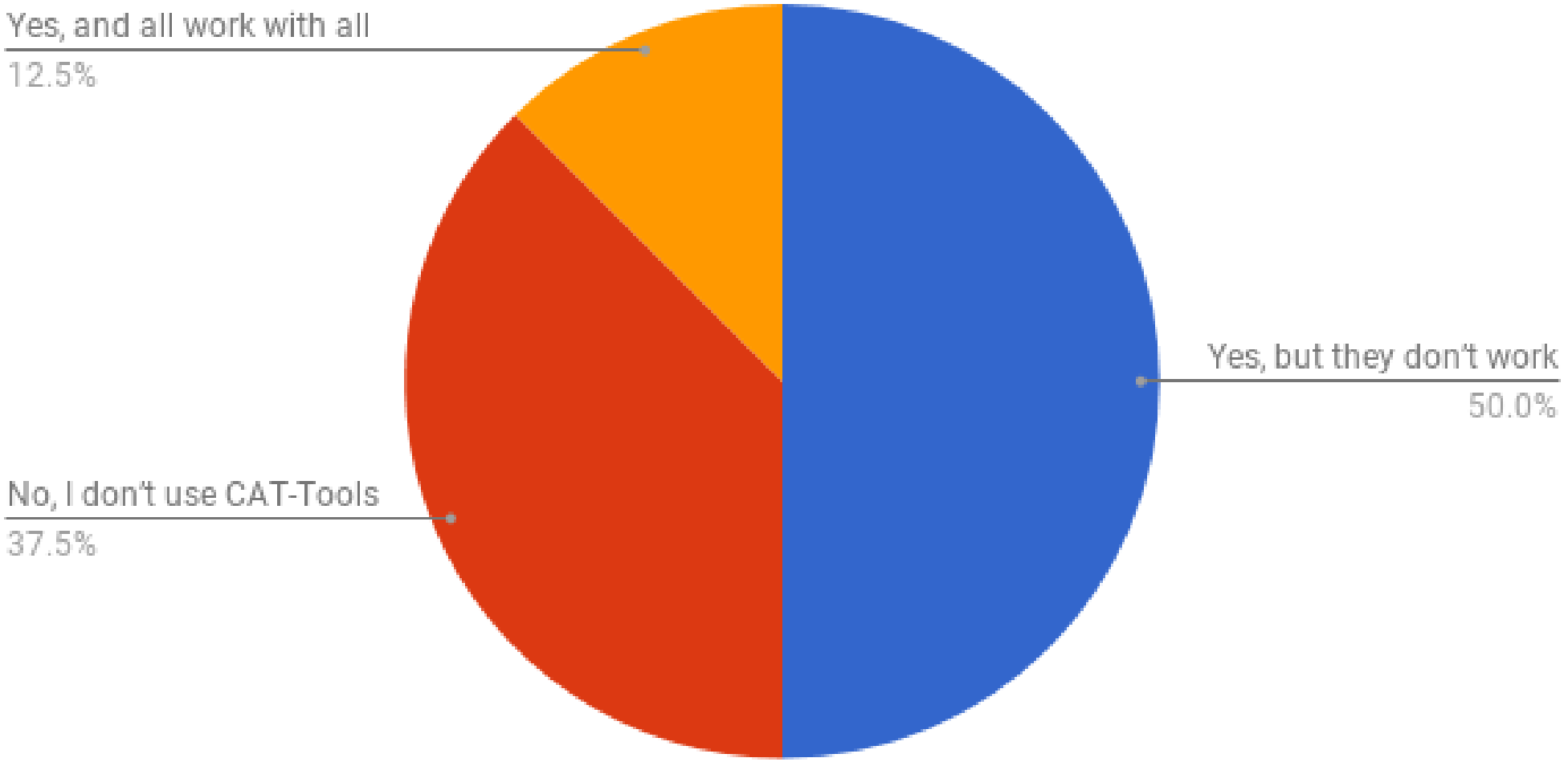


22. If you replied “yes” to question 21, which type?



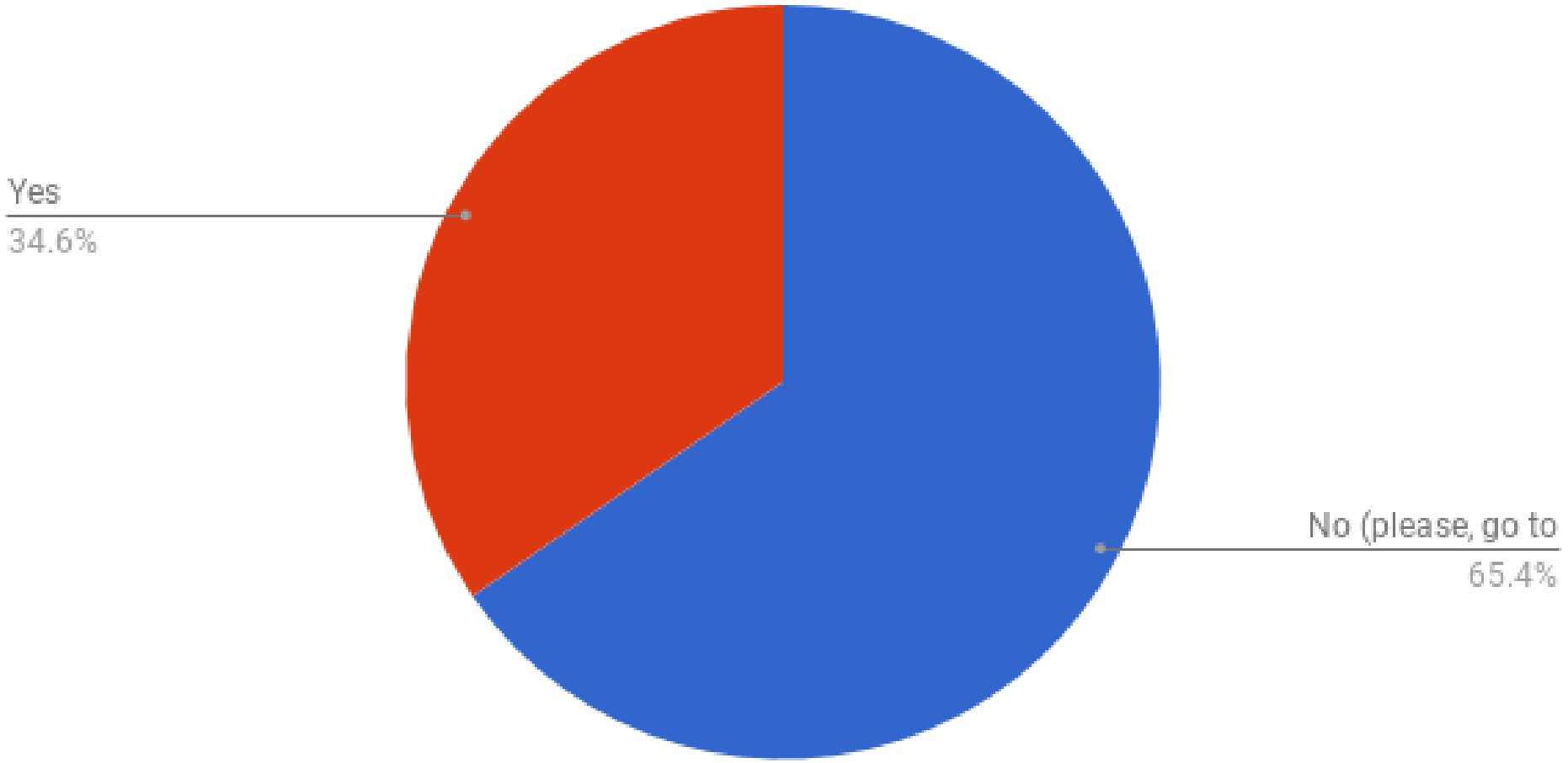
	23. Please list the software selected previously (please be as specific as possible):
JAWS, Screenrader	
Jaws	
Dragon Natural Speaking 15	
Dragon Naturally Speaking	
I am using the screen reader NVDA to get the information from the screen of the computer in acoustic form. It's a freeware.	

24. Do you use the aforementioned special software within your CAT-Tools?

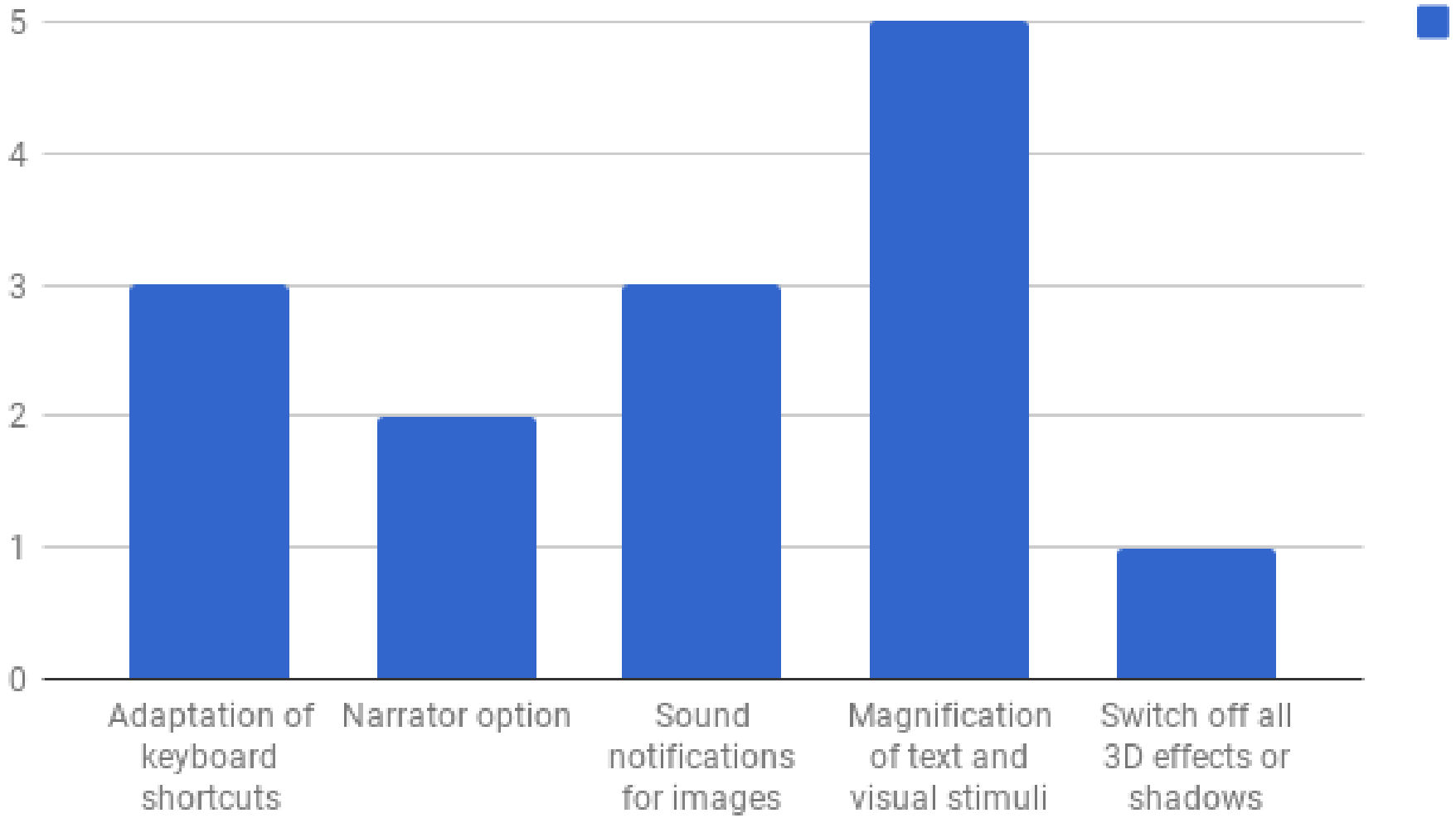


	25. If you replied “yes” to question 24, but they fail to work in all CAT-Tools, please specify the exceptions (program and CAT-Tool):
With JAWS 17 and Windows 7 I am not able to work with the latest Version of Trados and Memoq. I don't know how the other cattools mentioned in the list are working. I have heared that Fluency is accessible but I didn't try it. With Trados I worked with the Version 2009. By using this Version I could write the Translation and read the target- and source text. I didn't try the version 2017 but I have heared that this version is less acccessible for screenreader users.	1
not all voice orders work, the recognition is of lower quality within in the CAT-tool than with e.g. Word.	1
Regarding CAT tools, I selected "I don't use CAT tools" to the question whether I use CAT tools because the CAT tools I use are not in the list, and there is no field where I can specify another CAT tool. I use Fluency Now by Western Standard, and for one agency I have to use an online CAT tool called MateCat. These two CAT tools work well with my screen reader. But I once tried using MemoQ, but it was completely inaccessible for me because Jaws wouldn't read anything to me. So I couldn't work with it at all. And I have heard that Trados is also very inaccessible for blind users, but I have never tried it myself.	1
Tstream Editor	1

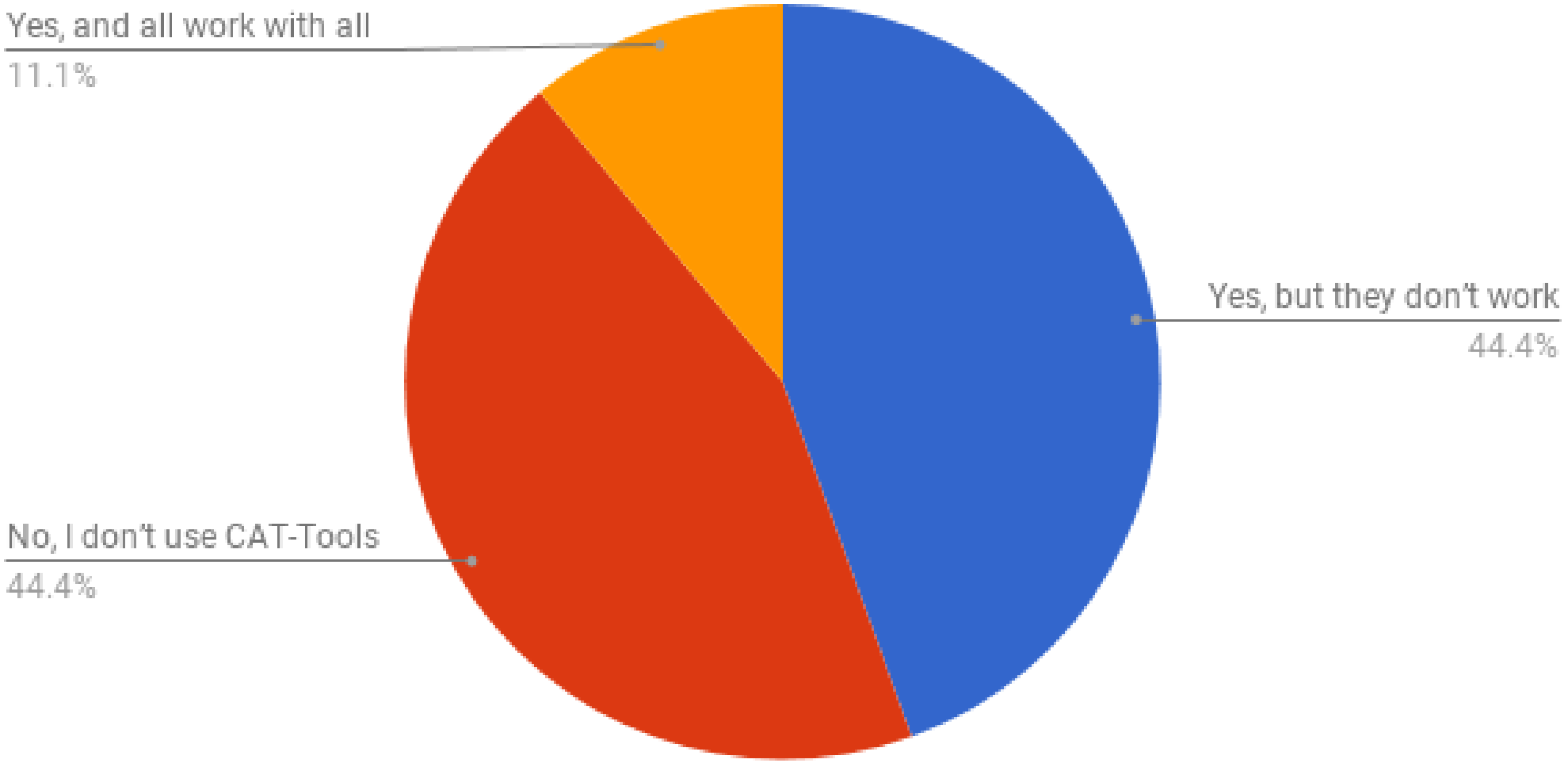
26. Do you require special layout optimisation (magnification or others) in order to translate?



27. If you replied “yes” to the question 26, which type?

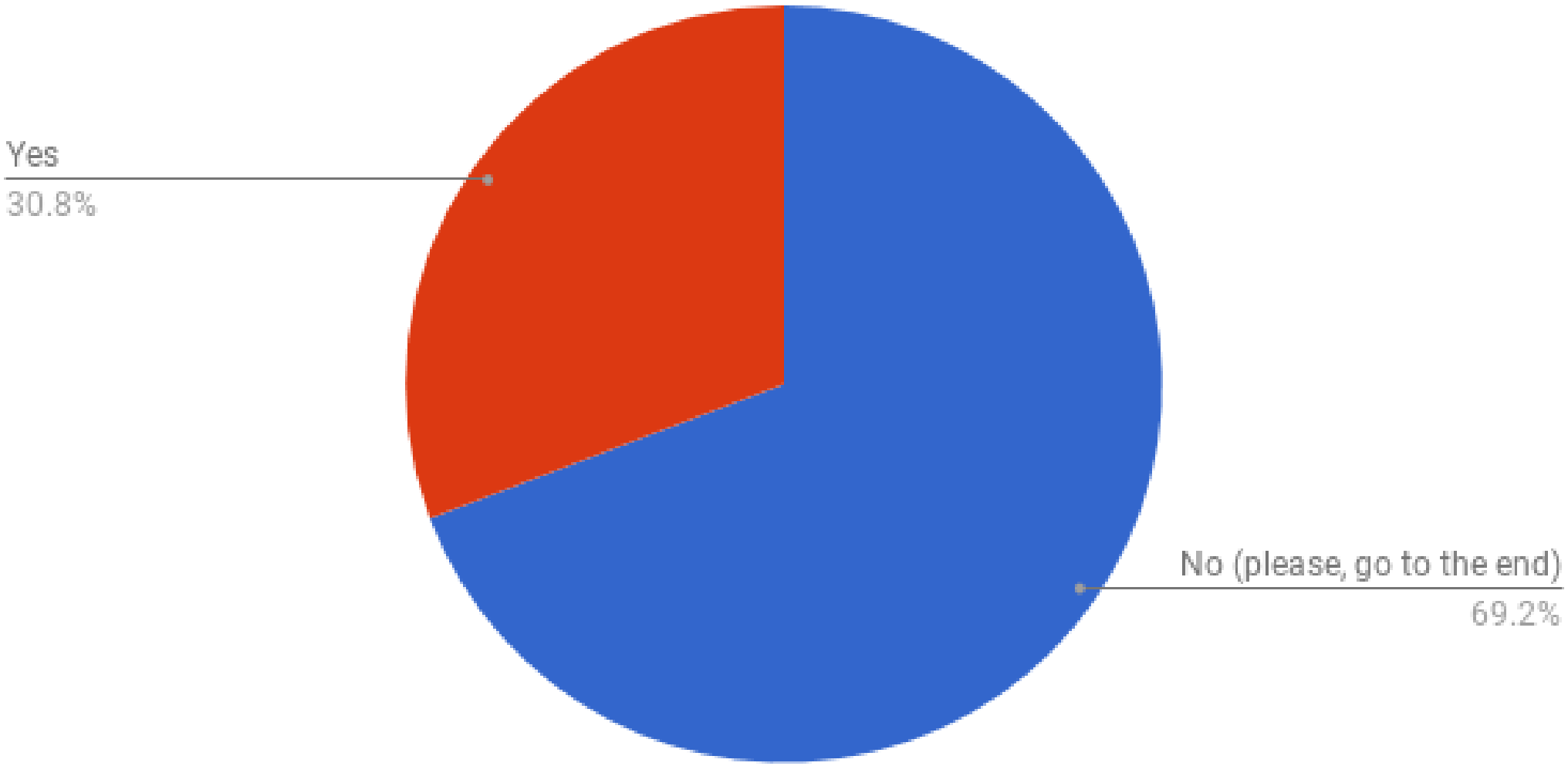


28. Do you use the aforementioned layout options within your CAT-Tools?

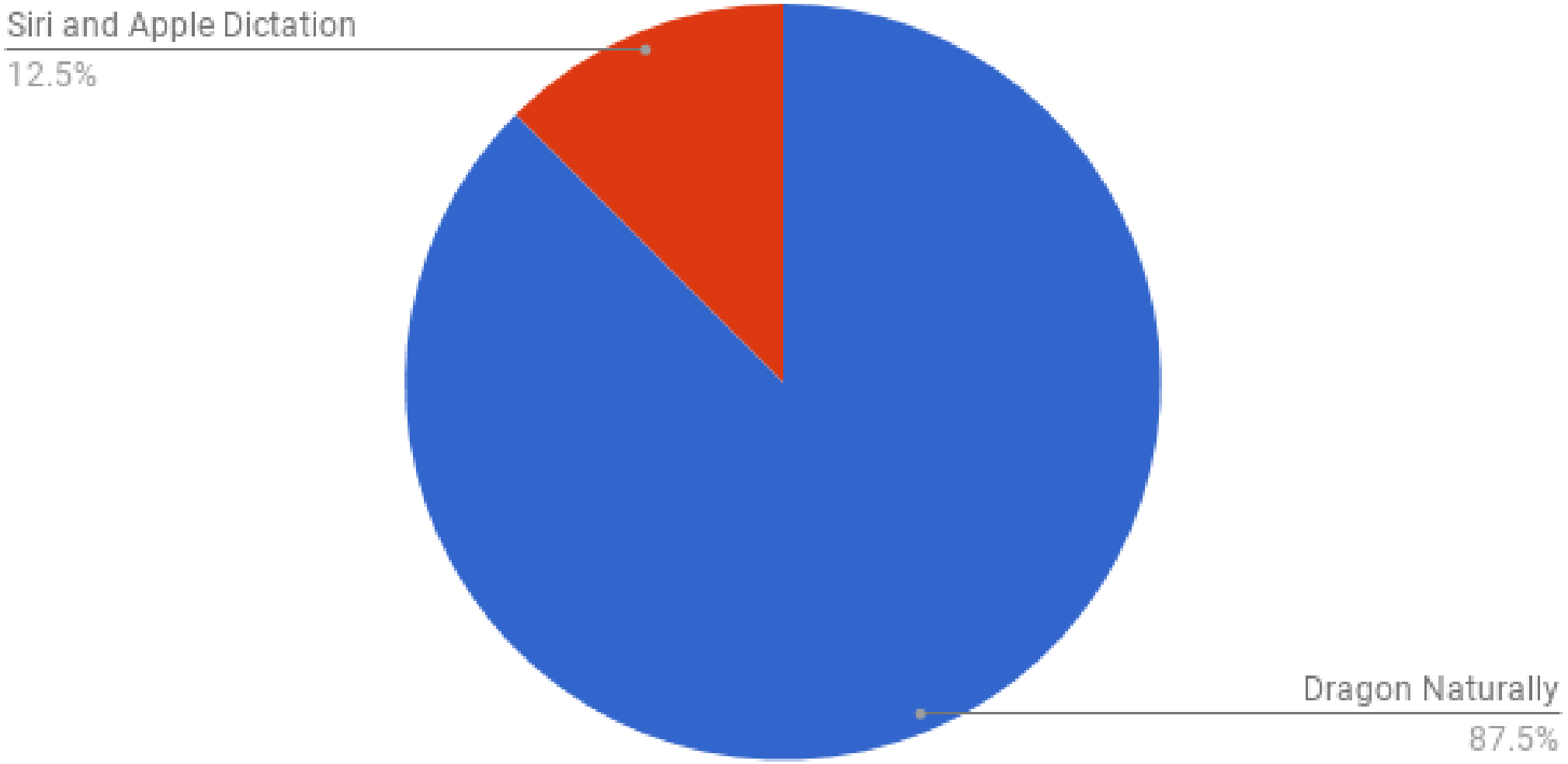


	29. If you replied “yes” to question 28, but they fail to work in all CAT-Tools, please specify the exceptions (option and CAT-Tool):
With trados I used the cattools with the version 2009. They worked fine but I don't know how they are working in version 2017.	1
Icons in SDL Trados are too small and cannot be magnified enough for my needs	1
Tstream Editor	1

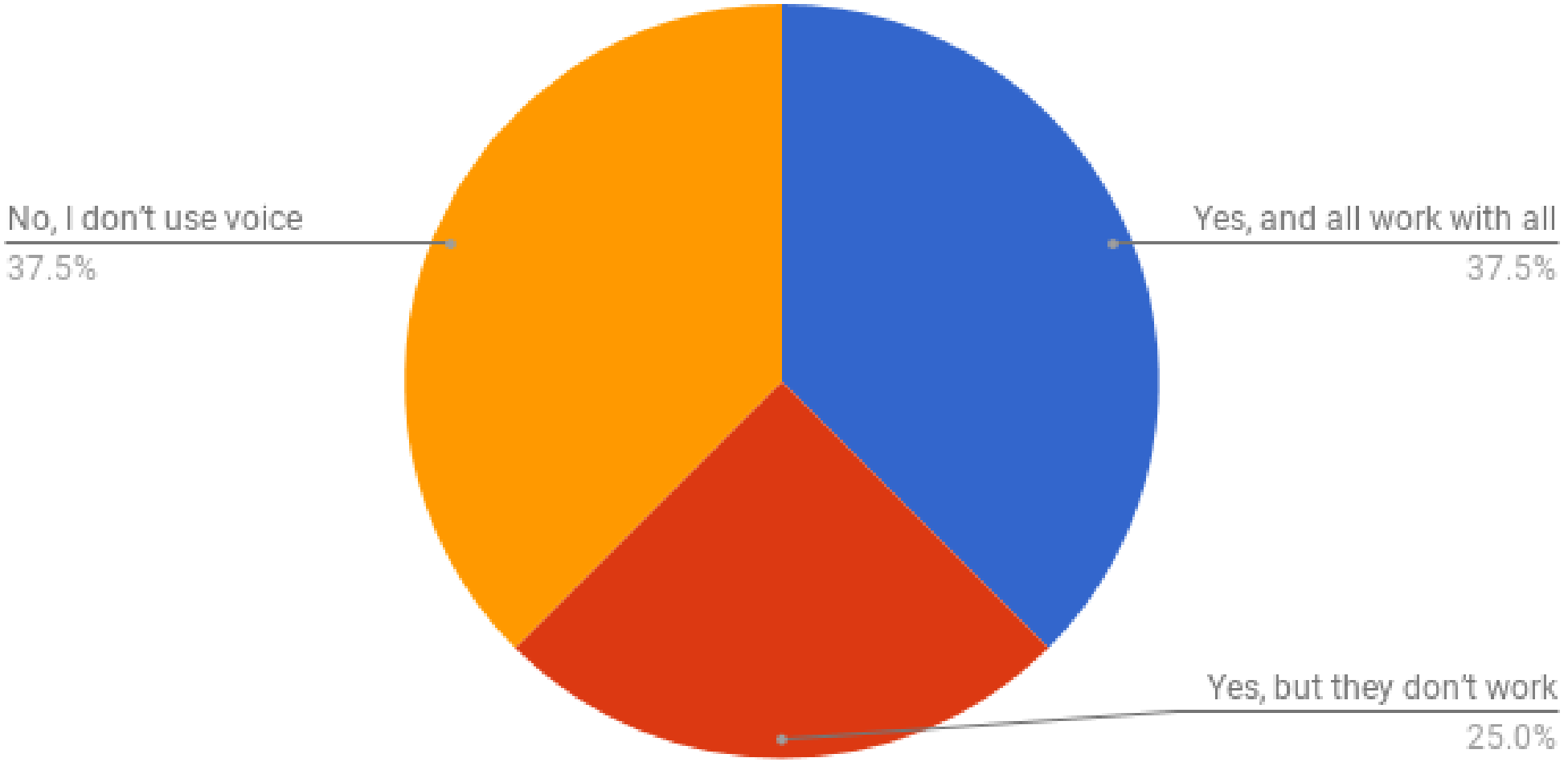
30. Do you use Voice Recognition software in order to translate?



31. If you replied “yes” to question 30, which type of software (choose all that may apply)?



32. Do you use the aforementioned Voice Recognition software within your CAT-Tools?



	33. If you replied “yes” to question 32, but they fail to work in all CAT-Tools, please specify the exceptions (program and CAT-Tool):
I only tried it with Wordfast anywhere and CafeTran, it works but not always very good.	1
Tstream Editor	1